17 MAR 1908

JOURNAL

OF THE

CEYLON BRANCH

OF THE

ROYAL ASIATIC SOCIETY,

1907.

VOLUME XIX.

No. 58.

BRITISH MUSEUM NATURAL HISTORY

EDITED BY THE HONORARY SECRETARY.

The design of the Society is to institute and promote inquiries into the History, Religions, Languages, Literature, Arts, and Social Condition of the present and former Inhabitants of the Island, with its Geology and Mineralogy, its Climate and Meteorology, its Botany and Zoology.

Price: to Members, Re. 1; to Non-Members, Rs. 2.

COLOMBO:

H. C. COTTLE, GOVERNMENT PRINTER, CEYLON.

1908.

JOURNAL

OF THE

CEYLON BRANCH

OF THE

ROYAL ASIATIC SOCIETY,

1907.

VOLUME XIX.

No. 58.

BRITISH MUSEUM NATURAL HISTORY

EDITED BY THE HONORARY SECRETARY.

The design of the Society is to institute and promote inquiries into the History, Religions, Languages, Literature, Arts, and Social Condition of the present and former inhabitants of the Island, with its Geology and Mineralogy, its Climate and Meteorology, its Botany and Zoology.

COLOMBO:

H. C. COTTLE, GOVERNMENT PRINTER, CEYLON.

1908.

CONTENTS.

PAGE

Paper not read :—

" Notes on Painting, Dyeing, Lacwork, Dumbara Mats, and Paper in Ceylon," by A. K. COOMARASWAMY, D.Sc. 103

Annual General Meeting : March 15, 1907 : .. 122

Annual Report for 1906 123

Archæological Survey, 1906 : Synopsis of work done by the 126

Office-Bearers for 1907, election of 138

The President's Address 138

Paper read :—

" Nuwara-gala, Eastern Province," by F. LEWIS.. 142

Council Meeting : May 30, 1907 154

General Meeting : May 30, 1907 156

[The Proceedings of this Meeting, and the Paper which was read at it (" The Discovery of Ceylon by the Portuguese in 1506," by DONALD FERGUSON), with the Discussion which followed, will be issued as Vol. XIX., No. 59, 1907, of the Journal.]

Council Meeting : August 27, 1907 157

General Meeting : September 30, 1907 159

Papers read :—

" Roman Coins found in Ceylon," by JOHN STILL.. 161

" Notes on a find of Eldlings made in Anurádhapura," by JOHN STILL 191

" Some Early Copper Coins of Ceylon," by JOHN STILL 199

General Meeting : November 4, 1907 216

Papers read :—

" Joan Gideon Loten, F.R.S., the Naturalist Governor of Ceylon (1752–57), and the Ceylonese Artist de Bevere," by DONALD FERGUSON .. 217

" A few Remarks on Prehistoric Stones in Ceylon," by JOHN POLE 272

JOURNAL

OF THE

ROYAL ASIATIC SOCIETY,

CEYLON BRANCH.

NOTES ON PAINTING, DYEING, LACWORK, DUMBARA MATS, AND PAPER IN CEYLON.*

By A. K. Coomaraswamy, D.Sc.

1.—*Technique of Sinhalese Painting.*

It is impossible in a short space to treat adequately of Sinhalese painting, the most important and most interesting branch of Sinhalese art, architecture excepted. The best place to study painting is in old viharas such as Degaldoruwa, Ridi Vihare, Danagirigala, where there still remains good 18th century work done for King Kirti Sri, that liberal patron of religion and the arts ; something is also to be learnt from old painted furniture and from the few existing but very beautiful illuminated paper manuscripts of the 18th and early 19th centuries.

Vihara paintings are executed *in tempera* on the walls and ceilings ; the usual subjects are of course religious—Jatakas, scenes from the life of Gotama Buddha, Mara's battle, the twenty-four assurances, and the like ; pictures of the gods are

* Reprinted, with additions and corrections, from the "Handbook to the Exhibition of Arts and Crafts in connection with the Ceylon Rubber Exhibition." Colombo, 1906. See C. A. S. Journal, Vol. XIX., No. 57, 1906, p. 98, Council Meeting, November 20, "Resolution 4."

also common, and often a portrait of the endower or restorer of the shrine, which portraits are useful records of 18th century costume.

The vihara wall paintings generally include narrative illustrations of Jatakas; they use the method of continuous narration, *i.e.*, the same figures are repeated continually without break along a series of panels, in the different situations proper to the progress of the story ; the story is depicted as a whole, not as a series of isolated pictures. One of the most noticeable features is the extreme delicacy of the drawing; there is often a wealth of fine detail which it is almost impossible to copy. The style of course is strictly appropriate and decorative, very restful, and pleasant; the pictures do not intrude themselves, but are there when you want them; adapting Morris, "the wall is a wall still and not a window; nay a book rather, where, if you will, you may read the stories of the gods and heroes, and whose characters, whether you read them or not, delight you always with the beauty of their form and colour."

It is however in pattern designing that the Kandyan painter really excelled. The finest work of this kind is found in ceiling paintings of the 18th and early 19th centuries. Most elaborate patterns based on a proper geometrical construction and having withal a delightful spontaneity are found. The best of this work is equal to anything that has ever been done in pattern designing. Beside patterns, ceiling paintings often include, as at Kelaniya, representations of the nine planets, the twelve signs of the zodiac (all personified), and the like subjects. Amongst the best surviving ceiling paintings are those at Kelani, and in a vihara at Ganegoda near Pelmadulla.

The amount of furniture used was so small that it is not surprising that few painted examples remain. It is clear however that the Kandyan craftsman, like the mediæval European, was given to painting his wood and ivory work. The finest example of painted woodwork I know of is the large book-box at the Ridi Vihare.

Of illuminated manuscripts of the 18th century very few survive, but these are in many respects so excellent as to make the absence of others very regrettable. Those existing are executed on Dutch paper, and consist of Buddhist scriptures with pictures and conventional ornament.

There exist also working drawings and specimen drawings on Dutch paper, executed in the 18th century.

The old paintings are executed in a gum medium and in a very limited range of colours—red, black, and yellow, and sometimes shades of these produced by mixture with white. Blue and green are only very rarely found.

The old pigments were prepared as follows:—

White.—This is *makul* or kaolin (Chinese white); it is chiefly obtained near Maturata. It is often mixed with other pigments to make pink, gray, &c.

Red.—This is *sadilingam* or cinnabar, which is still purchasable in the bazaars and used as of old. The mineral is not known to occur in Ceylon and must always have been imported.

Yellow.—This is gamboge from the *gokatu* tree (*Garcinia morella*); but the material preferred for some purposes, such as painting on wood, is orpiment (*hiriyal*); it is now customary to use *hiriyal* generally even where *gokatu* would be better.

Black.—This is lamp-black, to prepare which jak milk, *kekuna* oil, and *dummala* are ground up together and mixed with shreds of cotton cloth, then set over a small fire in a clean chatty with another turned over it; the soot is deposited on the upper chatty and collected.

Blue.—This colour is very rarely seen; it was obtained from the leaves of the *nilgas* (indigo), but small quantities only were available. In the great majority of old paintings blue is absent, and so is green.

Green.—Made by mixing blue with yellow. Very sparingly used and generally absent altogether.

Gold.—Gold is used in one case in an old (18th century) pattern book which I have seen, and in an 18th century *banadaham pota*, or breviary, a paper MS. said to have

belonged to King Narendra Sinha. The gold prepared for use is said to have been brought from Siam. Its use is certainly not indigenous.

Shades of colour.—Red, black, and blue are mixed with white to form respectively pink (*imbul sivi*), gray (*sudu kalu* or *nilsivi*), and pale blue (*nilsivi*). The gray is generally used in place of blue or green where either of these colours would appear natural or necessary, as for trees, or representations of Vishnu, the "Blue God." A little yellow added to the gray gives it a greenish tinge. The use of these shades (never in such a way as to produce undue relief or interfere with the flatness of the decoration) and so also of *limited* quantities of other colours (particularly green on painted woodwork), and of the invariable black outline tempers any hardness of contrast between the red and yellow.* The whole range of colours may be thought very limited, but it will be found that a sufficiently varied use can be made of them, and the very limitation was a safeguard and a stimulus to the imagination and ingenuity of the Kandyan painter.

According to the proper method the aforesaid pigments were finely powdered and mixed with gum (*divul latu*) of the elephant-apple tree and water, which dries without glaze.

Oil colours were never used;† but where desirable, as in the case of paintings on wood (book covers, book boxes, and other furniture) or outdoor work, the colours are protected by a layer of varnish (*walichchiya*). This varnish is made thus: powdered *dummala* (which must be white and clean, not dark) is mixed with *dorana tel* (oil obtained from the *dorana* tree, *Dipterocarpus glandulosus*. Thw.) and boiled for half an hour or more and then allowed to cool, when it is ready for use; after some two or three days it begins to harden, and more oil must be added and the whole boiled to make it again fit for use. The varnish so prepared smells strongly of

---

* *Cf.* Ruskin, "Stones of Venice," Vol. III., ch. I., § xxviii.

† I have finally assured myself on this point since the Handbook was issued.

turpentine and dries quickly. The yellow *gokatu* (gamboge) paint is said to be itself a *walichchiya* and not to require any other varnish. A superior method of varnishing small wooden articles is to cover the painting with a thin coating of carefully cleaned and strained *keppettiya lakada.* Old book covers will always be found to have been so treated.

The brushes *teli kura* used are made of cats' or squirrels' hair, and are very small and delicate. Long, fine, stiff brushes for drawing delicate lines are prepared from *teli tana* awns (*Aristida adscensionis*). Larger brushes are made from the aerial roots of *wetakiya*, a species of Pandanus.

One great merit of the old Sinhalese painter is the thoroughness of his knowledge of the preparation and properties of the pigments and tools at his disposal; their natural limitations moreover tended to restraint and gravity. The old methods are still well understood and sometimes followed by the best workmen; unfortunately, however, those responsible for modern vihara decoration rarely take the trouble to secure their services; and the majority of inferior painters run riot with Aspinall's enamel and Rickett's blue, with which they depict designs more like those to be looked for on second-rate Christmas cards than suitable for temple walls. Even the best men are rarely proof against the temptation to make use of new and gaudy colours, which destroy the beauty even of the best design; and even if they desire to adhere to old ways, those responsible prefer to buy cheap colours and so save something for themselves, for it must be admitted that the use of good colours, as of most things worth using, involves the expenditure of time and money. It is to be hoped that Sinhalese, and especially lay incumbents of temples, will in the future feel a growing sense of their responsibility in these matters, both as regards the preservation of good old work, and in seeing that they do not continue to hand down to posterity productions vastly inferior to those which they themselves received from the past.

2.—*Notes on Dyeing in Ceylon.*

The three plants most extensively used for dyeing in Ceylon are *chaya* (*Oldenlandia umbellata*), *patangi* (*Cæsalpinia sappan*), and jak (*Artocarpus integrifolia*).

Chaya root dyeing is, or rather was, only practised in the Northern Province, and especially in the Mannar District; "Painter street" in Mannar is still occupied by persons of the Dyeing caste. Casie Chitty states in his Gazetteer (1834) that "chaya root, which yields a scarlet dye, grows wild almost all over the northern districts, and the collection as well as the sale of it was once the exclusive monopoly of Government, farmed out to private individuals. In 1830, however, the monopoly was abolished, the revenue having declined from £2,000 to £200 per annum; and the trade is now not only left open, but free from all taxes. None but a particular class of natives dig for the roots, and when under a monopoly they were remunerated at the rate of ¾*d.* per pound. Indigo likewise grows wild. .... but does not seem to flourish when cultivated." In Trimen's Handbook to the Flora of Ceylon, II., 316 (1894), it is stated that the root was then still gathered to a small extent, and that a village in Mannar is wholly occupied by a caste who dye cloths with it. "The colour is a dull pinkish purple and very durable. There was formerly a considerable export to India.... Extracts from the Dutch records referring to the collection of this plant for Government are given by the late Colonial Surgeon Ondaatje in the Appendix to the Ceylon Almanac for 1853, pp. 14–16."

The fullest description of the dyeing process is given by S. Katiresu in the Ceylon National Review, No. 2, 1906. The *chaya* root is generally used in combination with other dyes; these are applied in the required places after the parts which are to remain white have been protected by bees-wax, and then comes the dyeing proper with *chaya* root. "In a caldron or earthen vessel....some 4 or 5 gallons of water are gently heated and about a quart of *chaya* root powder is put in and boiled gently, say the heat not to rise over 110° F.

Now the cloth is allowed to boil in it for about two or three hours at the same heat. It is taken out, dried in the shade, washed in cold water, and dried again. A second caldron or vessel is also made ready in a similar way, but in this case the heat of the water is increased to about 145° F. ....A third caldron is also so made ready and the process repeated, but in this case the heat is increased to about 180° or 190° F. This heat melts the wax on the cloth. Some dyers who believe in doing things on the cheap try the third process directly without going through the former two. This does not give the enduring power to the cloth, nor is the colouring fast.... The colour thus produced is called *mantaliniram*." If alum be mixed with the *chaya* root, a dark reddish colour is produced; "this colour may also be obtained by soaking the cloth first in a mixture of water with gallnut powder, and then, after drying, in a mixture of water with alum."

The dyes used in combination with *chaya* root to produce black or red lines are called *karam* and are prepared thus: for black, "about 2 ounces of alum and 1 lb. of iron filings or rust are put into a vessel containing about a quart of water and are left to lie for two or three days until the water grows dark. If it is not dark enough, some more iron is put in; for red, the *karam* is prepared without iron, and the cloth is previously soaked in a mixture of gallnut powder and water; or for black, iron put into the water of a young coconut, in the proportion of about a pound to a quart may be used, and forms an indelible black if used on a cloth previously soaked in gallnut water; while for red a 10 per cent. solution of alum may be used on a cloth previously soaked in gallnut water. The parts to be so coloured are painted with the *karam* previous to the general dyeing with *chaya* root, the parts to be white remaining protected by beeswax throughout.

This art of dye painting on cloth is a very ancient one; the old Kandyan flags and Dewala hangings used to be so done, almost certainly by Tamil workmen. Painted cloths are still made in Jaffna for the Sinhalese market. The

custom of Sinhalese painters of painting on cloth with pigments (as in the Peradeniya Exhibition hangings) is quite different and comparatively unsatisfactory. *Chaya* root dyeing, however, is almost a thing of the past, for alizarine or aniline dyes are now almost or quite exclusively used in place of it, of which Mr. Katiresu states that "the colour produced is totally different from the *chaya* root dye. It has none of the good qualities of the *chaya* root. It does not help to preserve the cloth, nor is it warmer, nor can it stand the washing of the dhoby."

So much for *chaya* root.

I am inclined to think that madder and indigo have not been used as dyes in Ceylon, and that the blue and red cotton used by Sinhalese weavers has always been imported, as is now the case. Colonial Surgeon Ondaatje states that madder, though found in Ceylon, appears never to have been used by the Sinhalese as a dye. Trimen says the same.* Of indigo Trimen remarks that it is not cultivated in Ceylon, but the "natives of Jaffna use the leaves of the wild plant in obtaining a dye for cloth." Mr. Nevill (*Taprobanian*, Vol. I., p. 112) says: "There is in Ceylon a wild indigo, but it does not appear ever to have been exported, or to have been of special value. It affords a bright pale blue dye, locally, but slightly, used." The blue was also made use of as a pigment. It may be worth while to encourage the cultivation of indigo on a small scale in the northern districts.

Patangi (*Cæsalpinia sappan*) is the most important of other Ceylon dyes. It is used for colouring palm and grass leaves for mat weaving, a fine red; it is also applied to rattan for baskets, to ola leaves for various purposes, and to the *niyanda* fibre used by Rodiyas and Kinnaras for making whips, brooms, and mats.

---

* But Mr. Donald Ferguson reminds me that *ruiva* roots were used in Dutch times for dyeing. (See Lee's Ribeiro 173–4. 195 Pielaats Memoir 29.) Post. *ruiva* = Lat. *rubia* = madder.

The materials chiefly used in making the best mats are *indikola* (*Phœnix zeylanica*) and *hewan* (*Cyperus dehiscens*). The proper process of dyeing this with *patangi* is rather complicated, and the practice varies in different districts. At Niriella the process was as follows. On the first day two handfuls of *korakaha* leaves (*Memecylon umbellatum*, Burm.) are pounded in a mortar, squeezed out in water by hand, and the resulting liquid, resembling pea soup, strained; two handfuls of *patangi* chips are added and the whole left to stand. On the second day the solution has become red. The *patangi* chips are removed, pounded, and replaced, and the whole boiled with the *indikola* which is to be dyed, tied up in little sheaves. The pot is allowed to cool and left till next day. On the third day leaves of *bombukola* (*Symplocos spicata*, Roxb.), *hin-bowitiya* (*Osbeckia octandra*, D.C.), and *korakaha*, pieces of *kebella* bark (*Aporosa Lindleyana*, Baill.), and a handful of chips of a yellow wood called *ahu* (*Morinda tinctoria*), together with a small bundle of roots of *ratmulgas* (*Knoxia platycarpa*, Arn. var.) are pounded and added to the solution in which the *indi* leaves remain ; the whole is boiled and then allowed to cool and stand till next day, when the leaves are removed and dried, after which they are ready for use.

I have another receipt from Welimada. To a pound of *galeha* (another grass used for mats) take two pounds *korakaha* (or *welikaha*), half a pound of *kiribat-mul* (root of *Knoxia platycarpa*), two pounds *patangi* powder, four cents weight of green "saffron," half cent weight of lime, and four pots of pure water. Boil for three days with a strong fire in the morning, slow fire during the day, and again strong fire in evening and slow fire during the night. The pot must not be removed from the hearth during the three days, after which the dyed grass can be removed and dried in the shade.

The colour thus produced is a fine red, which does indeed fade slowly, but lasts as long as the mat is likely to, which is more than can be said of the aniline dyes which have

now entirely replaced *patangi* in many districts. Of these the magenta is unpleasant and the green very fugitive.

The customary method of dyeing grasses or palm leaves black is to bury them in rice field mud, after soaking in an extract of gallnuts (*aralu* or *bulu*). The lower oxide of iron in the mud combines with the tannin to form tannate of iron, or ink. For this information I am indebted to Mr. Kelway Bamber.

A dye prepared from mangrove and called *kadol* is used in the Kalutara District for dyeing nets, boat sails, and coir, and as a coating for brick floors (information received from the Totamune Mudaliyar).

A yellow dye is sometimes got from the young fruits of the *kaha* (*Bixa orellana*), or from "saffron," (? *turmeric*) which is pounded in a mortar, extracted with water, and boiled for an hour with the leaves to be dyed.

The yellow dye of priests' robes is obtained from the wood of the jak (*Artocarpus integrifolia*), in an extract of which the cloth to be dyed is soaked; the extract is sometimes boiled also with *bombu* leaves. The yellow dye is not permanent, but is easily renewed, and the colour improves with repeated applications.

The mats made by the Kinnaras from *niyanda* fibre are coloured red, black, and yellow; the red is made with *patangi* with the addition of *korakaha* leaves and gingelly oil and alum; the yellow is obtained from the yellow wood of the *weniwel* creeper (*Coscinium fenestratum*) and *kaha* fruits; the fibre is boiled for a day in a decoction of these; the black colour is produced with the help of gallnuts (*aralu*, *Terminalia chebula*, and *bulu*, *Terminalia beleria*) and rice field mud.

These dyes are satisfactory in appearance, but are not very permanent, and the mats are found to be considerably faded after one or two years. They are however cheap goods and not intended to last for ever. Still it would be very fortunate if some better mordants could be devised, as the aniline dyes (which are not yet used by the Kinnaras, but are much used by other mat and basket weavers) are no better, but rather

worse than the original ones in respect of permanency and much worse in respect of beauty, which is after all the only reason why dyes are used at all—a fact which is sometimes forgotten.

It will be seen that the art of dyeing has not been developed in Ceylon to so great an extent as in India, and it is now much more neglected than was the case sometime ago. So long, however, as it is thought worth while to dye materials at all, it may as well be done well, and now that cotton is likely to be grown again in Ceylon and weaving may be partly revived, it may be possible also to improve and revive the art of dyeing. This should be done by endeavouring to improve the method of application of the old vegetable dyes of Ceylon and of India, while the use of aniline or alizanin dyes should be carefully discouraged.

3.—*Lacwork.**

Lacwork is a well-known industry in India and Ceylon. In Ceylon it is quite a small industry, and deserves to flourish and be encouraged as such.

Ceylon lac is the product of two species of the lac insect, both different from the Indian. One called *keppettiya* or *konlakada* (*Tachardia albizziæ*, Green) occurs on several trees, amongst which are the *keppettiya* (*Croton aromaticus*), *kon* (*Schleicheria trijuga*), and *hinguru* (*Acacia cæsia*). The other species (*Tachardia conchiferata*, Green) is called *telakiriya lakada*, and is found on an euphorbaceous plant called *telakiriya* (*Excœcaria agallocha*); this is a rarer species, but produces lac of a brighter and clearer quality. Beside these, small quantities of imported Indian lac are sometimes used.

Lacwork is now carried on in Kandyan districts at Hapuwida (South Matale), Pallekanda near Balangoda, and Hurikaduwa in Pata Dumbara, and in the low-country at Angalmaduwa, near Tangalla.

---

* This account of lacwork in Ceylon is partly based on Mr. E. E. Green's article on Lac, Annals R. B. G., Peradeniya, Vol. I., Part V., Supplement, 1903.

The Matale work is by far the most distinctive, and may be described in detail, after which the Hurikaduwa and Angalmaduwa methods will be referred to.

The Matale work is called *niyapoten weda* or finger-nail work; this name is given because the work is done chiefly with the finger or thumb nail. The lac pigments are prepared as follows. The freshly collected twigs bearing the lac insects are dried in the sun; the resin is then removed, pounded, and winnowed or sifted. The crushed lac is enclosed in narrow bolster-shaped bags of thin cloth; the bags are heated over charcoal fires and twisted till the melted lac oozes through the cloth. The lac is scraped off; a part of it is next softened over a fire and attached to the point of a small stick, and then again warmed and a second stick attached. The softened lac is then drawn out between the two sticks, worked about, doubled up, and redrawn many times until it assumes the form of a long stout ribbon of glistening fibrous lac of a bright golden brown colour. The pigments are now mixed into the lac by softening it and pounding the coloured powders into it. The four colours used are red, yellow, green, and black; of these, the red is vermilion (*sadilingam*); the yellow, orpiment (*hiriyal*); the green is yellow with the addition of "dhobies' blue", formerly "*punil*" (indigo); and the black is prepared in the same way as the black used in painting.

The lac thus prepared is used for the decoration of a large variety of articles, especially wooden sticks of various kinds, such as staffs (*herimiti*), handles of ceremonial spears, banners, fans, &c., ceremonial pingos, &c., and also to many other things such as powder horns (*wedibehet karaka*), clarionets (*horanewa*), book covers (*pot kambi*), &c., and it is also used as an inlay in ivory, horn, and chank work. For this purpose the ivory is incised with lines and circles which are filled up with the coloured lac. In the case of turned ivory or horn, this is effected by holding a piece of lac against it, while revolving on the lathe; the lac heated by friction is softened and fills up the incised grooves. The ornament in Kandyan

districts is confined to incised lines and circles similar to work from Jodhpur in India (Watt, "Indian Art at Delhi," p. 179); but flat plates of ivory inlaid with scroll and floral ornament are used in the fittings of calamander boxes made in the low-country, particularly at Matara, and this style reminds one of the similar methods of decorating ivory used on the musical instruments still made at Tanjore.

Returning to a consideration of the ordinary *niyapoten weda*, it will be best to describe the process in its simplest and commonest form, namely, in the decoration of a staff. The stick having been shaped and smoothed, the workman squats on the ground, having before him a chatty (*gini kabala*) containing a charcoal fire. The lacworker's tools consist of short sticks with a lump of coloured lac at one end of each and a short strip of *puskola* (talipot leaf, *Corypha umbraculifera*). The stick is first coated with the ground colour, usually red. To effect this, the stick is warmed over the fire and lac applied, which lac is pressed and smoothed out with the piece of talipot leaf, while still kept warm over the fire; in this way the whole stick is gradually covered with a coating of red lac. It now remains to add the pattern, which may be very elaborate. For this it is needful to draw out the lac into strips of the desired thinness. To do this, the lump of lac is well warmed, and then, a small piece being held between finger and thumb, the rest is pulled away, leaving a long thin connecting thread which is wound round the bent knee, into a skin. After passing four or five times round the knee the lac becomes cold and must be warmed afresh. Now to apply a narrow band of coloured lac to the stick, the stick is warmed gently, while kept continually turning by a small boy who squats behind the operator, and one end of the string of lac is attached to the stick by pressure, and the rest likewise as the stick turns; the thread of lac is nipped off by the thumb nail when a revolution is complete. The stick is then warmed again and smoothed with the leaf. For more complex patterns (and some are very elaborate) string lac is applied in first

the same way, and nipped off with the nail; dots are thus formed by applying the end of the thread of lac and cutting off a tiny piece with the nail; such dots are consequently square or diamond shaped.

The lacwork is usually limited to a small number of good conventional patterns admirably adapted to the nature of the material; when, as occasionally happens, these are departed from, and an endeavour is made to represent some more ambitious subject, such as an elephant or lion (as occasionally on book covers), the result is necessarily not quite so satisfactory. Most of the work however is from a decorative point of view thoroughly sound, and the colours pleasing.

ORNAMENT FROM A KANDYAN LACWORKED STICK.

The following are many of the names applied to patterns formed in finger-nail work—*welpota* (this is the pattern illustrated), *adarakondu* (plain lines), *bindu* and *galbindu* (diamond shaped spots), *kola wela* (an interlacing creeper pattern) *pala peti* (petal pattern), *lanu geta* (plait patterns), *patura* (elongated isosceles triangles), *bo-kola* (bo leaf) *dela* (net pattern), *suli wela* (another creeper pattern).

The Angalmaduwa and Hurikaduwa process differs from that above described in that the lac is applied to the wood while revolving on a turning lathe, the heat of friction softening the lac and causing it to adhere. This process is more limited, being only applicable to objects which can be turned on a lathe, and it does not admit of the delicate pattern work of

the finger nail process. In fact, the ornament can only consist of concentric bands of colour applied to the different parts of small (usually rickety) tables, chairs, tom-tom frames, and walking sticks. The old Kandyan lac striped round boxes (*abharana heppu*), bed legs (*enda kakul*), &c., were handsome and substantial. Hones (*kana lella*) were also made by lac workers, and consist of lac mixed with powdered *kurundugala*, properly corundun, sometimes garnet.

It will be seen that both kinds of lacwork differ fundamentally from painting in that brushes are never used; in this respect the work differs entirely also from the lacquer varnish work of Japan, with which it is sometimes compared and confused.

The technique differs also from that of the Maldive Islands, where the lac applied by turning is afterwards incised, a process also characteristic of the well-known Sindh boxes. Whether anything corresponding to the Kandyan *niyapoten weda* is found in any part of India, I am not able to say. It has at any rate a well-marked character of its own.

4.—*Mat Weaving by Kinnaras.*

The well-known Dumbara mats, called *kalala* or *kalale*, are made by low caste people called Kinnarayas. The fibre used is *niyanda*, obtained from the "bowstring hemp," *Sansevieria zeylanica*. The round green leaves are scraped against a log (*niyanda poruwa*) with a wooden tool (*gewalla*) like a spokeshave. After scraping, which removes the fleshy part of the leaf, the fibre is oiled and brushed, and is ready for use almost at once. A part only is left white, while the rest is dyed red, yellow, or black as required (see under "Dyeing"). The warp thread (*kalal heda*) is spun like cotton on a spindle (*idda*), but the weft elements (*nul heda*) are not spun at all and consist of parallel fibres. The loom is a low horizontal one, something like that used in cotton weaving, but much more primitive. There is no *alwala*, and the operator squats on the actual mat supported by a few flat logs between it and the

ground. The pattern is picked up with a weaver's sword (*wema*), which has an eye at one end through which the weft fibres are threaded, thus serving as a bodkin to draw them through the warp ; a toothed comb (*alu karala*) like that of the cotton weaver's is used to drive the threads home. The raising and separation of alternate threads to facilitate plain weaving is effected by a very primitive type of heddles. The actual loops of the heddles (*welakadduwa*) remain in one position, not moving up or down ; every alternate warp thread passes through a loop. The separation of alternate threads is effected by the movement of two wooden rods, of which one (*uttarapata* or *kontaliya*) rests on the warp, the other (*pannambate*) passes between alternate threads of it.

The warp is carried on two rods, *kotta kura* and *adina kanda*. The first of these is a thin rod which is tied to the stouter *heda kanda* which is itself tied to sticks driven into the ground. This is at the near end. At the far end, the *adina kanda* is held by two strings (*kadu pa-lanu*) to two posts (*kalalkanu*), and is tightly strained. The heddles are supported on a tripod arrangement of sticks (*tunpa kolle*) which is moved along the mat as work proceeds.

The warp is laid (*diggahanawa* or *heda lanawa*) in two operations. First the spun thread (*nul*) is unwound from the spindle, broken and passed through the loops of the heddles and the teeth of the comb ; the short ends left projecting through the comb are loosely tied to prevent the threads slipping out again. The remainder of the warp is then laid according to the required length, broken off, and joined on to the short ends already prepared.

Mats of perfectly plain weaving in stripes are called *pannam kalala ;* the usual sort are also decorated with birds, and these are called *kurullu kalala ;* mats with a variety of patterns are called *weda peduru* or *weda kalala*. Other animals such as fish, deer, elephants, cobras are often found on elaborate examples as also trees (called *malgaha*) and a variety of geometrical patterns (*toran petta*, *taruka petta*, *pannam petta*,

depota lanuwa, *tunpota lanuwa*, *delgeta lanuwa*, *ratwat-alankaraya*, *taniweliruwa*, &c.).

When the weaving is finished the projecting ends of fibre at each end of the mat are turned up over a thread drawn tight along the edge (like a piping-cord) and knotted each one to it by another thread which catches up each projecting end in a slip knot, forming a neat binding.

The mats are pleasant in colour and sometimes varied in design, and can be turned to various decorative ends; they may be made into screens or used as a dado or allowed to serve their natural purpose on the floor. After two or three years, however, the colours are somewhat faded, but as new mats are not very expensive, the old ones can then be renewed.

5.—*Paper and Tinder in Ceylon.*

Of *paper making*, now a lost art in Ceylon, Mr. W. C. Ondaatje wrote as follows in 1854:—*

"The manufacture of paper by the Kandyans during the period the country was under native rule is a subject which I conceive is fraught with much local interest, nor am I aware that public attention has before been directed to it. It seems probable, from the intercourse that once subsisted between the ancient inhabitants of the Island and the Chinese, especially in connection with the cinnamon trade, that the Singhalese derived their knowledge of manufacturing paper from the latter, who, it is well known, have made it from the *liber* or inner bark of a species of morus, cotton, and bamboo from time immemorial. Whilst botanizing in the jungles of Badulla a species of fig was pointed out to me by an old Kandyan doctor, which, he said, had formerly been used to make paper from...... On further inquiry I ascertained from another aged Kandyan that the plant to which my notice had been first called was of a different species from that which had been used by his countrymen for making paper. This individual himself had never made any, but understood the method

* Observations on the Vegetable Products of Ceylon. Colombo, 1854.

......as his ancestors had to supply the stores of the Kings of Kandy with paper, being that branch of the general service that had been imposed on them—a service better known by the name of 'Rajakariya,' or compulsory labour. The paper thus manufactured by them was not used for the purpose of writing upon, but for making cartridges for gunpowder. The people on whom this duty devolved were the natives of Baddegama in the District of Badulla, who received grants of land in consideration of the service they rendered to the State.

"The tree from which the Kandyans made their paper is a species of the Ficus, called in Sinhalese 'nanitol,' which is found in great abundance everywhere in this country...... The following is the Kandyan method of making paper. From the tender branches the whole of the bark is stripped, and afterwards the inner bark (*liber*), which is of great tenacity, is separated by the hand from the outer skin, and is put into a large earthen pot and boiled with the ashes of the *Erythrina indica* (*Erabodu*, Sin.) until it becomes soft, when it is removed and beaten with a wooden mallet on a stone till it assumes the consistency of dough. It is next put into water and churned with the hand, which process soon converts it to a fine homogeneous emulsion. This is poured into a frame, having a cloth bottom floating in water. It is again agitated with the hand until the whole becomes uniformly spread over the cloth on which it settles down smoothly. The frame being then withdrawn from the water, which is allowed to drain off gradually, is next put to dry in the sun. When dry the paper thus formed is easily removed from the cloth bottom, and becomes soon fit for use. It is very tough and remarkable for its tenacity, and does not appear to be liable to the ravages of insects, as I have seen a specimen of the paper made by the Kandyans about fifty years ago, which is still in excellent preservation, although no very great care seems to have been taken of it. It is only adapted for writing upon with Indian ink."

COUNCIL MEETING.

Colombo Museum, January 30, 1907.

Present :

Proceedings of Council Meetings of January 30 and February 8, 1907, accidentally omitted from Journal, Vol. XIX., No. 58, should be bound up as paged.

two Papers by Mr. John Still, entitled "Notes on a find of Eldlings made in Anurádhapura," and "Roman Coins found in Ceylon," referred to Messrs. C. M. Fernando and P. E. Pieris for their opinions.

Resolved,—That the Papers be accepted for reading and publication.

4. Laid on the table Circular No. 351 of November 29, 1906, regarding the reprinting of the English translation of the "Mahá-waṉsa."

. . . . . .as his ancestors had to supply the stores of the Kings of Kandy with paper, being that branch of the general service that had been imposed on them—a service better known by the name of 'Rajakariya,' or compulsory labour. The paper thus manufactured by them was not used for the purpose of writing upon, but for making cartridges for gunpowder. The people on whom this duty devolved

thus formed is easily removed from the cloth bottom, and becomes soon fit for use. It is very tough and remarkable for its tenacity, and does not appear to be liable to the ravages of insects, as I have seen a specimen of the paper made by the Kandyans about fifty years ago, which is still in excellent preservation, although no very great care seems to have been taken of it. It is only adapted for writing upon with Indian ink."

COUNCIL MEETING.

Colombo Museum, January 30, 1907.

Present :

The Hon. Mr. J. Ferguson, C.M.G., President, in the Chair.

Mr. P. Freudenberg, J.P., Vice-President.

Mr. R. G. Anthonisz.
Mr. S. de Silva, Gate Mudaliyár.
Dr. W. H. de Silva, M.B.,C.M., F.R.C.S.
Mr. C. M. Fernando, M.A., LL.M.
Mr. A. M. Gunasekera, Mudaliyár.
The Hon. Mr. S. C. Obeyesekere.

Mr. J. Harward, M.A., Honorary Secretary.

Business.

1. Read and confirmed Minutes of last Council Meeting held on November 20, 1906.

2. Resolved the election of following as Members :—

(1) J. Parsons, B.Sc.: recommended by { (*a*) A. K. Coomáraswámy. (*b*) G. A. Joseph.

(2) C. L. Joseph, Proctor, S.C.: recommended by { (*a*) G. A. Joseph. (*b*) C. M. Fernando.

(3) Lieut. H. J. Jones, A.O.D.: recommended by { (*a*) J. Harward. (*b*) G. A. Joseph.

3. Laid on the table Circulars Nos. 312 and 324 containing two Papers by Mr. John Still, entitled "Notes on a find of Eldlings made in Anurádhapura," and "Roman Coins found in Ceylon," referred to Messrs. C. M. Fernando and P. E. Pieris for their opinions.

Resolved,—That the Papers be accepted for reading and publication.

4. Laid on the table Circular No. 351 of November 29, 1906, regarding the reprinting of the English translation of the "Mahá-waṇsa."

Resolved,—That the Secretary do write—

(1) To the Páli Text Society, requesting particulars regarding the scope of Prof. Geiger's work and probable date of its appearance, and informing the Society that the question of a new edition of the English translation is under consideration.

(2) To Government, notifying the above action, and adding that the Council recommend that the question of reprinting be deferred until a reply has been received from the Páli Text Society.

5. Laid on the table a Paper entitled "Some Early Copper Coins of Ceylon," by Mr. John Still.

Resolved,—That the Paper be referred to Messrs. C. M. Fernando and P. E. Pieris for their opinions.

6. Laid on the table a Paper by Mr. Donald Ferguson, entitled "John Gideon Loten, F.R.S., the Naturalist Governor of Ceylon (1752–57), and the Ceylonese Artist de Bevere."

Resolved,—That the Paper be referred to Messrs. R. G. Anthonisz and F. H. de Vos for their opinions.

7. Laid on the table a letter from the editor of the memorial volume to Dr. Friedrich von Spiegel soliciting contributions in the field of Irunian literature.

Resolved,—That the Secretary do reply that there seems no prospect of any Member being able to contribute a Paper on Irunian subjects.

8. Laid on the table and considered the Annual Report for 1906.

9. Considered date and business of Annual General Meeting.

10. Discussed the appointment of Office-Bearers for 1907.

Resolved,—That an expression of regret be conveyed to Mr. H. C. P. Bell at his proposed resignation of office as Editing Honorary Secretary, and that he be requested to reconsider his decision.

11. Laid on the table a letter from Lady Ashmore thanking the Society for the expression of sympathy on the death of Sir Alexander Ashmore.

Resolved,—That the letter be read at the next General Meeting.

12. Laid on the table an invitation from the Seventh International Zoological Congress.

Resolved,—That it be announced at the next General Meeting.

13. Laid on the table an advance copy of the Journal for 1906.

14. Resolved,—That a Council Meeting be held on Friday, February 8, 1907, at 5 P.M., to nominate Office-Bearers and discuss the question of employing a paid Secretary.

COUNCIL MEETING.

Colombo Museum, February 8, 1907.

Present :

The Hon. Mr. J. Ferguson, C.M.G., President, in the Chair.

Mr. P. Freudenberg, J.P., Vice-President.

Mr. R. G. Anthonisz.
Mr. C. Drieberg, B.A., F.H.A.S.
Mr. S. de Silva, Gate Mudaliyár.
The Hon. Mr. S. C. Obeyesekere.
Mr. A. M. Gunasekera, Mudaliyár.
Mr. C. M. Fernando, M.A., LL.M.

Mr. J. Harward, Honorary Secretary.

Business.

1. Read and confirmed Minutes of Council Meeting held on January 30, 1907.

2. Laid on the table a letter from Mr. H. C. P. Bell resigning the office of Honorary Secretary.

Resolved,—That the result of private correspondence between the President and Mr. Bell be awaited.

3. Laid on the table a Paper on "Nuwara-gala," by Mr. F. Lewis.

Resolved,—That the Paper be referred to Mr. H. C. P. Bell and Mr. Simon de Silva, Mudaliyár, for their opinions.

4. Laid on the table a Paper entitled "Portuguese Ceylon at the beginning of the Seventeenth Century: a Sketch," by Mr. P. E. Pieris, M.A., C.C.S.

Resolved,—That the Paper be referred to the Hon. Mr. J. P. Lewis and Mr. J. Harward for their opinions.

5. Discussed the question of employing a paid Secretary.

Resolved,—That a sum of Rs. 500 per annum be voted, to be paid monthly, beginning from January 1, 1907, as an honorarium to Mr. G. A. Joseph in recognition of his long and valuable services as Honorary Secretary and Honorary Treasurer.

6. Considered the election of Office-Bearers for 1907. Dr. J. C. Willis and Mr. E. B. Denham having been deemed to have retired by reason of least attendance, the vacancies were filled

by the nomination of the Hon. Mr. G. M. Fowler and the Hon. Mr. Justice A. Wood Renton. Dr. Coomáraswámy having resigned his place on the Council, Mr. P. E. Pieris was nominated.

Resolved,—That the following gentlemen be named as Office-Bearers for 1907 :—

President.—The Hon. Mr. John Ferguson, C.M.G.

Vice-Presidents.—The Hon. Mr. J. P. Lewis, M.A., C.C.S.; Dr. A. Willey, M.A., D.Sc., F.R.S.; Mr. P. Freudenberg, J.P.

Council.

Mr. C. M. Fernando, M.A., LL.M.
Mr. A. M. Gunasekera, Mudaliyár.
Dr. A. J. Chalmers, F.R.C.S.
Mr. C. Drieberg, B.A., F.H.A.S.
Mr. R. G. Anthonisz.
Dr. W. H. de Silva, M.B., C.M., F.R.C.S.
The Hon. Mr. S. C. Obeyesekere.
The Hon. Mr. P. Arunáchalam, M.A., C.C.S.
Mr. S. de Silva, Gate Mudaliyár.
The Hon. Mr. G. M. Fowler, C.M.G.
The Hon. Mr. Justice A. Wood Renton.
Mr. P. E. Pieris, M.A., C.C.S.

Honorary Treasurer.—Mr. G. A. Joseph.

Honorary Secretaries.—Mr. J. Harward and Mr. G. A. Joseph.

7. Laid on the table a Paper by Mr. H. W. Codrington, entitled "Notes on the Smith Caste in the Kandyan Provinces." Referred to Mr. H. C. P. Bell and Mr. Simon de Silva, Mudaliyár, for their opinions.

Resolved, that Mr. Codrington be thanked for offering the Paper, but he be informed that the Council regret not being able to accept it for the reasons specified.

30 NOV. 1909

BRITISH MUSEUM NATURAL HISTORY

I have seen specimens of the old paper in the possession of Kandyan painters. It is of a whitey-brown colour, very coarse texture, and rather thick.

Tinder making is also described by Mr. Ondaatje. There is a woolly material found at the base of the leaves of the *kitul.* " After having collected a sufficient quantity of the material, which they call ' kitul poolung,' and well drying it in the sun, they mix it with the ashes of the leaves of the *Solanum verbasiolium* (*Hakirilla*, Sin.), *Vitex trifolia*, and lime rind, and thus is made native tinder." The tinder was carried in a little round bag made of plaited cotton, and with a small opening from which a little of the tinder could be extracted as required.

ANNUAL GENERAL MEETING.

Colombo Museum, March 15, 1907.

Present :

The Hon. Mr. J. Ferguson, C.M.G., President, in the Chair.

Mr. P. Freudenberg, Vice-President.

Mr. R. G. Anthonisz.
Mr. P. de Abrew.
Mr. F. J. de Mel, M.A., LL.B.
Mr. S. de Silva, Gate Mudaliyar.
Mr. L. de Saram, Solicitor.
Mr. W. A. de Silva, J.P.
Mr. R. H. Ferguson, B.A.
Mr. C. M. Fernando, M.A., LL.M.
The Hon. Mr. G. M. Fowler, C.M.G.
Mr. I. Gunawardena, Mudaliyar.
Dr. C. A. Hewavitarana, M.B., C.M.
Mr. D. B. Jayatilaka, B.A.
Mr. P. D. Khan.
Mr. S. B. Kuruppu, Proctor.
Mr. P. E. Morgappah.
Mr. C. Namasivayam.
Dr. A. Nell, M.R.C.S.
Mr. E. W. Perera, Advocate.
Mr. F. A. Tisseverasingha, Proctor, S. C.
Mr. G. E. S. S. Weerakoon, Mudaliyar.

Mr. J. Harward, M.A., and Mr. G. A. Joseph,

Honorary Secretaries.

Visitors : Twelve ladies and twenty-seven gentlemen.

Business.

1. The CHAIRMAN, before beginning the Proceedings, expressed his own regret and that of the Meeting that the Patron of the Society, His Excellency the Governor, was not with them, as he had fully intended to be. His Excellency's Private Secretary had sent a telegram from Hambantota to the Secretary of the Society, stating that owing to the arrival of the Duke of Connaught on Sunday, instead of Monday, the Governor regretted that he must go to Kandy on the 14th, and could not, therefore, preside at the Meeting of the Society on the 15th. That explained His Excellency's absence.

2. Mr. G. A. JOSEPH read the Minutes of the previous General Meeting held on December 11, 1906, which were confirmed.

3. Mr. HARWARD read a letter from Mr. E. Alison, on behalf of Lady Ashmore, thanking His Excellency Sir Henry Blake, Patron, and the Members of the Society for its vote of condolence with her on the death of her husband, the late Sir Alexander Ashmore.

4. The CHAIRMAN said he had next to call the attention of those present to the architectural drawings and photographs of ruined structure at Polonnaruwa made by the Archæological Survey Department. The Head Draughtsman, Mr. Perera, was present, and, after the ordinary proceedings were over, would be able to point out to any one interested various points in regard to those illustrations.

5. Mr. HARWARD read an invitation received from the Seventh International Zoological Congress to be represented at its Meeting to be held at Boston, Mass., U. S. A., from 19th to 23rd August.

MEMBERS.

6. Mr. G. A. JOSEPH announced that the following gentlemen had been elected Members of the Society since the General Meeting held on December 11, 1906:—Mr. J. Parsons, Director of the Mineralogical Survey, Mr. C. L. Joseph, and Lieut. H. J. Jones, A.O.D.

7. Mr. HARWARD next read the Council's Report for 1906.

ANNUAL REPORT FOR 1906.

The Council of the Ceylon Branch of the Royal Asiatic Society have the honour to submit the following Report for the year 1906:—

MEETINGS AND PAPERS.

Three General Meetings of this Society have been held during the year, at which the following Papers were read and discussed:—

(1) "The Coconut Palm in Ceylon: Beginning, Rise, and Progress of its Cultivation," Part I. up to 1660 A.D., by the Hon. Mr. J. Ferguson, C.M.G.

(2) "Some Survivals in Sinhalese Art," by Dr. A. K. Coomaraswamy, Sc.D.

(3) "A Lecture on a Sinhalese Painted Box: A Study of Kandyan Art and Artists," by Dr. A. K. Coomaraswamy, Sc.D.

JOURNALS.

One number of the Journal. (Vol. XVIII., No. 56, was published during the year. It contains, in addition to the Proceedings of the Meetings, the following Papers:—

(1) "Mr. Isaac Augustin Rumpf," by Mr. F. H. de Vos, Barrister-at-Law.

(2) "Portuguese Inscriptions in Ceylon," by Mr. J. P. Lewis, M.A., C.C.S.

(3) "Rajasinha I., Parricide and Centenarian: A Review," by Mr. W. F. Gunawardhana, Mudaliyar.

(4) "Two Old Sinhalese Swords," by Mr. C. M. Fernando, M.A., LL.M.

(5) "Third Supplementary Paper on the Monumental Remains of the Dutch East India Company of Ceylon," by Mr. F. H. de Vos, Barrister-at-Law.

(6) "Notes on the Variations of the Copper Massas of Six Sinhalese Rulers," by Mr. J. Still.
(7) "Note on a Dutch Medal," by Mr. F. H. de Vos.
(8) "Notes on Paddy Cultivation Ceremonies in the Ratnapura District (Nawadun and Kuruwiti Korales)," by Dr. A. K. Coomaraswamy, Sc. D.
(9) "The Photography of Colour as applied to obtaining correct Colour Records of Natural History Subjects," by Prof. W. Saville-Kent, F.L.S.

MEMBERS.

During the past year sixteen new Members were elected, viz. :—

Life Members.

D. S. D. Bandaranaika, C.M.G., Maha Mudaliyar.
M. Supramaniyan.

Ordinary Members.

H. W. Codrington, C.C.S.
P. D. Warren, Surveyor-General.
Dr. J. W. S. Attygalle.
G. B. Gardner.
F. A. Tisseverasingha, Proctor, S. C.
The Hon. Mr. A. Kanagasabai.
J. P. Obeyesekera, Advocate.
G. D. Templer.
P. T. P. Gunawardana.
G. W. Sturgess, M.R.C.V.S.
D. Finch Noyes.
The Hon. Mr. A. Wood Renton.
M. C. F. P. W. Kaviratna.
L. W. F. de Saram.

The following Members have resigned, viz. :—S. M. Burrows, C.C.S., H. L. Moysey, C.C.S., and J. H. Renton.

The Society now has on its roll 213 Members, including 27 Life Members and 10 Honorary Members.

The Council record with regret the death of the following Members :—Messrs. P. Coomaraswamy, H. Freudenberg, and the Hon. Mr. H. Wace.

Mr. Coomaraswamy joined the Society in 1871. He contributed the following Papers to the Society's Journal :—

(1) "Chilappatikaram: A Tamil Poem," Vol. XIII., No. 44, 1893.
(2) "A Half-hour with Two Ancient Tamil Poets," Vol. XIII., No. 45, 1894.
(3) "Gleanings from Tamil Literature," Vol. XIV., No. 46, 1895.
(4) "King Senkuttuvan of the Chera Dynasty," Vol. XIV., No. 46, 1895.

Library.

The additions to the Library, including parts of periodicals, numbered 406.

The Library is indebted for donations to:—The Government of India; Mr. J. F. W. Gore; Revista da Commissao Archeologica da India Portugueza; the Siam Society; Cuerpo de Ingenieros de Minas del Peru; the Archæological Survey of Punjab and United Provinces; the University of Colorado; Mr. L. Jones; Mr. Adair Welcker; Mr. M. Rangacharya; Iowa Geological Survey; the Hon. the Colonial Secretary, Ceylon; the Government of Madras; the Linguistic Survey of India; Sir R. C. Temple, Bart.; the Pali Text Society, London; Mr. H. R. Nevill, I.C.S.; the Planters' Association, Ceylon; the Postmaster-General, Ceylon; the Archæological Survey of Madras and Coorg; Mr. J. H. Hollander, Ph.D.; the Secretary to the Government of India; the Secretary of State for India in Council; Mr. W. D. Whitney; Prof. W. A. Herdman, F.R.S.; the Australian Association for the Advancement of Science; the Archæological Survey of India; Mr. M. A. C. Mohamad; the Anthropological Society of Australasia.

The following Institutions are on the exchange list, and receive the Society's Journal:—

The Royal Society of Victoria, Australia; the Royal University of Upsala, Sweden; the Royal Geographical Society, London; the Academy of Natural Sciences, Philadelphia, U.S.A.; the Smithsonian Institute, Washington, D.C., U.S.A.; the Bombay Branch of the Royal Asiatic Society; the Buddhist Text Society of India; U. S. Department of Agriculture, Washington, D.C., U.S.A.; the Wagner Institute of Sciences, Philadelphia, U.S.A.; the Geological Survey, New York, United States of America; the Field Columbian Museum, Chicago; the State Archives, Netherlands; the Bureau of Education, Washington, U. S. A.; the Societie Zoologique, Paris; the Anthropologische Gessellchaft Koniggratzer, Strasse, Berlin; the Batavia-asch Genootschap van Kunsten en Wetenschappen Batavia, Java; the Deutschen Morgenlandischen Gesellschaft, Halle, Germany; the American Oriental Society, Conneticut, U.S.A.; the Royal Society of New South Wales, Australia; the California Academy of Sciences, U.S.A.; La Societie Imperiales de Naturales de Moscow, Russia; the China Branch of the Royal Asiatic Society; the Asiatic Society of Japan; the Royal Asiatic Society of Great Britain and Ireland, London; the Indian Museum, Calcutta; the Madras Literary Society, Madras; the Asiatic Society of Bengal, Calcutta; the K. K. Naturhistorischen, Austria; the Musee Guimet, Paris; the Zoological Society of London; the John Hopkin's University, Baltimore; the Geological Society of London; the Anthropological Institute, London; the Oriental Society, Pekin; the Geological and Natural History Survey of Canada; the Royal Colonial Institute, London; the Straits Branch of the Royal Asiatic

Society, Singapore; the Koninklijk Instituit voor de Taal-Land-en Volkenkunde van Nederlandsch-Indie, Holland; the Royal Geographical Society of Australasia (South Australian Branch), Adelaide; the Korea Branch of the Royal Asiatic Society; the Techno-Chemical Laboratory, Bombay; the University Library, Cambridge; the Director-General of Archæology, India.

Council.

Two Members of the Council of 1905, viz., the Hon. Mr. S. C. Obeyesekere and Mr. H. White, by virtue of Rule 16 are deemed to have retired by seniority; and under the same Rule Mr. P. Ramanathan and Dr. J. C. Willis by least attendance have vacated their places. Of these gentlemen, two being eligible for re-election, the Hon. Mr. S. C. Obeyesekere and Dr. J. C. Willis were re-elected; and the vacancies in the Council were filled by the appointment of the Hon. Mr. P. Arunachalam and Dr. A. K. Coomaraswamy.

Dr. A. Willey, D.Sc., F.R.S., Director, Colombo Museum, was elected a Vice-President, and his place in the Council was supplied by the appointment of Mudaliyar S. de Silva, Chief Translator to Government.

The vacancy caused by the resignation of Mr. H. F. Tomalin was filled by the appointment of Mr. E. B. Denham, B.A., C.C.S.

Accommodation.

The Council note that the extension of the Museum is to be taken in hand in 1907; and trust the work will be pushed on so as to afford much-needed room for the expansion of the Colombo Museum, its Library, and the Library of this Society.

Archæological.

The Archæological Commissioner has been so good as to favour the Council with a summary of the operations of the Archæological Survey during 1906 at Anuradhapura, Polonnaruwa, and Sigiriya.

Further, he has permitted a set of beautiful coloured drawings, on a large scale, of some of the chief ruins of Polonnaruwa, made by the Archæological Survey Draughtsmen, as well as several photographs to be exhibited at this Meeting.

I.—*Anurádhapura.*

(1) *Clearing Jungle.*

The moiety of the annual clearing vote for Anurádhapura, allotted to the Archæological Commissioner for keeping ruined areas outside Town limits free of jungle growth, was expended on the clearing of under growth and weeds in the ruined reservations at Abhayagiriya, Mirisaveṭiya, Elala Sohona, Tisavewa, Vessagiriya, Jetawanarama, and on the Outer Circular Road.

As in previous years, other important areas at Anurádhapura and Mihintale had to be left uncleared for want of sufficient funds to sweep all.

The Government has been moved to augment the annual grant.*

(2) *Excavations.*

By the order of the Government, excavation at untouched sites was temporarily suspended during 1904 and 1905, and the Archæological vote reduced in proportion.

The Department "harked back" to the re-cleaning of the very numerous sites, which had been excavated in the fifteen years since the Archæological Survey was commenced in 1900, and much needed fresh attention.

Since January, 1906, renewed steady progress has been made both at Anurádhapura and Polonnaruwa.

(*a*) *Mirisavetiya.*—Excavations were resumed at the point where they ceased in 1903. In 1902 five monasteries (including the chief *pirivena*, or monks' residence, of the *sańghárάma*) were worked off. These lie (except the large *pirivena* on the west) to the north-east and east of the Dágaba.

In 1903 a series of four more monasteries, stretching along the south side of the Dagaba, was unearthed, besides the handsome northern *mandapaya*, or portico, to the Dágaba's *maluwa*, and the massive slab wall and gangway of its northern side.

The early part of 1906 was given to the completion of the Mirisavetiya ruins. Starting from the south-west of the Dágaba, four additional monasteries to the west, and a fifth outlying on the south-west, were completed.

These Mirisavetiya monasteries, fourteen in all, which face towards the Dagaba, and surround it except to the north, are most uniform in plan. Each has its own entrance porch, directly behind which stands the viháré with satellite *piriven* (here only two instead of the usual four) lying off the front angles, and an occasional extra building or two. The stonework is in the simplest style. There is a marked general absence of that elaboration in the carved accessories to stairs (moonstones, terminals, balustrades), so noticeable elsewhere.

With the exception of one somewhat extensive slab-revetted site lying off the south-west corner of the Dágaba *maluwa*, the only ruins of any size are situated to the north-west. The largest of these was a rectangular building supported by some 100 pillars, probably intended for general use. The monasteries on the east contain an "alms hall," with sunk paved court in the centre, in which is one of the smaller monolithic "dug-outs," or stone boats, peculiar to Anuradhapura and Mihintale.

The excavation of the Mirisavetiya area was rounded off finally by the unearthing of the three remaining porticoes of the Dágaba's square *maluwa* on the west, south, and east. The two

---

* An extra sum of Rs. 2,000 has been sanctioned from 1908.

former lay very deeply buried under *débris*, piled up when the quadrangle was freed of earth some years ago.

These *maṇḍapa* differ from those of the three great Dágabas (Ruwanveli, Abhayagiriya, Jetawanáráma) in admitting directly on to the raised paved platform instead of merely into the *pita-vidiya*, or outer procession path, of the quadrangle.

Altogether, between seventy and eighty buildings have, from first to last, been excavated round Mirisavetiya Dágaba.

(*b*) *Thúpáráma Area.*—The ruins surrounding the Thúpáráma Dágaba were finished in 1895–96.

To the north-east of the Inner Circular road and immediately to the north of the present Hospital premises (which were gradually encroaching upon them) a quadrangular arrangement of pillar stumps showed aboveground, pointing either to a four-sided set of monks' cells, or to a square "alms hall."

The site was therefore excavated in 1906, and proved to be a large quadrangle, once divided up into rooms or cells for monks (such as those discovered already at Thúpáráma and Ruwanveli), facing inwards towards a central, open, *midula* or compound.

The building is of no architectural interest, and was obviously of late erection as it overruns older walls. A small dágaba, or *asohona*, jostles this quadrangle, and there are one or two minor ruins close by.

(*c*) *Vessagiriya.*—During the absence of the Archæological Commissioner at Polonnaruwa, a start was made in July by his Assistant at this very ancient site—a tree sheltered outcrop of gneiss rock and boulders adjoining the high road from Anuradhapura to Kurunegala, about a mile to the south of the Sacred Bo Tree enclosure (*Udamaluwa*).

Ruins of structural buildings and *pokuṇu* are traceable around the cluster, evidently belonging to a large monastery. A score or more of caves occur in two of the three groups of rock boulders which stand, slightly separated, in line north and south. At an earlier period the caves alone served for shelter to hermit monks, as inscriptions above their brows testify.* If the *Mahawansa* is to be relied on, the Vessagiriya Vihare, as well as the not far distant Isurumuniya Vihare, were built by King Dewanampiya Tisa in the third century B.C.

The year's work at Vessagiriya was confined to the smallest and most northerly group of these rocks. Excavation has gradually disclosed it to be the site of an important rock-placed *pirivena* of a Buddhist monastery, which existed at least as late as the tenth century.

There can be no question as to the period when the buildings which once occupied this site were erected. Everything recalls the citadel on Sigiri-gala constructed by the parricide Kásyapa I. in the fifth century A.D. Steps, walls, mouldings all bear out the comparison. The two inscriptions of Mahindu IV. (975–991 A.D.),

---

* A dozen or so of these cave records have been published in the *Epigraphia Zeylanica*, Vol. I., Part I.

found at Vessagiriya some years ago,* allude to "Bo Upulvan Kasubgiri Vehera," which the *Mahawansa* records was built by Kasyapa I. (A.D. 479–497). So that architecture, lithic record, and ancient chronicle unite perfectly in confirming the identification of this site nearly fifteen centuries old.

Save perhaps the Toluvila Monastery and the "Buddhist Railing" site near Abhayagiriya Dágaba, these ruins at Vessagiriya are the oldest yet brought to light by the Archæological Survey at Anurádhapura.

II.—*Polonnaruwa.*

Archæological work was resumed at Polonnaruwa in June, and vigorously pushed on until the end of September.

(1) *Clearing.*

A gang of Sinhalese continued, and completed, the clearing of the outer rampart of the ancient city, working, from the point reached previously, southwards to its junction with the bund of Topavewa tank, a short distance to the south of the Promontory.

Subsequently the Sinhalese coolies widened the area already cleared round the "Potgul Vehera" Monastery, a mile to the south, and the ruined vihárẹ́ (mistermed "Demala Maha Sẹya") three and a half miles to the north, of the Promontory besides re-clearing the extensive area embracing the "Rankot Vehera," "Jetawanaráma," and the "Kiri Vehera." This ground teems with ruins, those near the two large Dágabas being of considerable size and importance.

All this preliminary work will greatly aid the regular survey of ancient Polonnaruwa which, upon the representation of the Archæological Commissioner, has been sanctioned by the Government, and is in hand.

(2) *Excavations.*

(*a*) *Quadrangle with Ruins.*—During June the force was fully occupied in most desirable "task work"—clearing away the high *débris* bank hiding the western wall of the large raised quadrangle on which "Thúpáráma," "Waṭa-dá-gé," and other ruins stand.

The whole space between the present main road and the high rubble ramp of the quadrangular site was levelled, freed of tree stumps, brickbats, &c., and smoothed.

The ancient approach to the several shrines by a staircase and entrance portico on the west has thus again been opened up.

The change in the appearance of the ruins upon the quadrangle, as now viewed from the road, is very marked.

(*b*) "*Potgul Vehera*" *Monastery.*—From July excavations were transferred to the (so-called) "Potgul Vehera," a mile or more from the Promontory. This, so far as known, is the only group of ruins to the south of the ancient city.

---

* Recently translated and edited by Mr. Wickremasinghe in the *Epigraphia Zeylanica*, Vol. I., Part I.

The "Potgul Vehera" and its appurtenant ruins form one monastery, and were doubtless connected with the granite-cut ascetic (commonly misnamed King Parákrama Báhu) and small dágaba, about two hundred yards to the north, where some work was done in 1904.

These ruins and the adjoining rock-hewn figure (11 ft. 6 in. in height) were briefly alluded to in the "Summary of Operations" for that year.

"South of the statue some two hundred yards, and within its direct purview, is situated a unique ruin now known as the 'Potgul Vehera' or 'Library Dágaba.' The chief feature is its circular back room, once domed, on the interior wall of which still exist traces of painting.

"This part of the ruin was gutted some years ago by villagers working under the orders of a Kandyan Chief, since deceased; and has been left exposed to the very foundations."*

Excavations were this year (1906) begun from the back, round the outside of the circular portion of the building, and gradually carried north and south along the rectangular vestibule which unites with the "rotunda" on the east front.

The outer face of the ruin was found to be embellished by pilasters and a series of false altars with niches above a moulded basement.

The ornamentation is in lime stucco, as at "Thúpáráma" and "Jetawanáráma;" but simpler. There is an entire absence of those elaborate zoophorous band-courses (dwarfs, lions, hansas, &c.) to be seen at the larger shrines. On the whole the mouldings, &c., are well preserved.

The back room of the structure was originally domed in the overlapping style of brick and mortar work, of which the vaulted roof of "Thúpáráma" Viháré furnishes a still existing example. The walls are even now sixteen feet high in places, and exhibit clearly at top the bellying shape they assumed from the spring of the dome.

What is left of the painting on the wall inside shows faint signs of flowers, &c.

Through a breach made in the circular wall, the room had been dug out by treasure seekers down to its foundations 3 ft. 6 in. below the stone sill of the only entrance from the vestibule, a doorway now choked with *débris*. Its real object is, therefore, unascertainable.

The "Potgul Vehera" stood on a rectangular *maḷuwa*, or terrace, stretching about 43 yards by 37, approached on the east. Its revetment still displays remains of a series of fronting elephant caryatides in bas-relief.

At each of the four corners of the *maḷuwa* is a diminutive pseudo-dágaba. These definitely fix the ruins as *Buddhistic*, not Hindú, though not a vestige of any images has been unearthed.†

---

* C. A. S. Journal, vol. XVIII., No. 56, 1905, p. 339.

† Confirmed by a short inscription of Chandavati, chief queen to Parákrama Báhu, cut on a fallen door jamb.

Below, and on three sides at least of, the raised terrace holding the shrine are about a dozen or more buildings, facing inwards, evidently the *piriveṇ* of the resident priests, the whole enclosed by a wall.

Between this and the outermost wall* (*sima pahura*) of the entire monastery lies a low bank of *débris*. This has still to be laid bare.

The whole area embraced by this monastery covered about three acres.

(*c*) "*Siva Dévâlé.*"†—This beautiful little stone shrine, in Dravidian style of architecture, stands at the north-east corner of the old city. It is far better preserved than the other, and larger, Siva Dévâlé (strangely termed by guide books "Dalada Maligawa") near the main group of Buddhist ruins ("Thúpáráma," "Waṭa-dá-gé," &c.).

The roof of its vestibule has partially fallen in, and the side walls are bulging in places. But the main part of the structure (except to a small degree in the north wall, and a few pieces of the coping and dome) remains nearly as perfect a when erected.

The shrine itself is 26 ft. in height and square (20 ft. 6 in.) in shape (lengthened by its vestibule to 29 ft. 3 in. in front) with an irregular octagonal, dome-like, roof of limestone which, now blackened by age, must once have contrasted strikingly with the dark granite of the walls.

The *sanctum* is windowless, and entered by a single door from the vestibule on the east. Inside it tapers up in angular, chimney-form, wherein colonies of bats have revelled undisturbed for centuries.

The *lingam* and *argha*, discovered outside the "Siva Dévâlé," have been replaced in the centre of the shrine.

Some rough digging appears to have been done here in 1885–86; but no attempt was made to drain off the rain water, which during the north-east monsoon collects round the base of the shrine, and must tend to loosen its foundations. The Dévâlé stands 3 ft. or more below the present ground level; and it was highly important for its protection, (after digging out the whole of the earth which has in course of years silted up and filled the roughly walled premises surrounding the building), to carry a drain thence through the neighbouring city rampart into the low ground outside. This drain was cut at the end of the past season.

Two smaller subsidiary shrines were built towards the back of the premises. That to the south-west is sacred to *Ganesha*, whose image was unearthed *in situ*.

(3) *Restorations.*

No restoration work was done at Polonnaruwa in 1905, owing to the same reason as affected excavations.

---

* This exterior wall measures nearly 360 ft. each way.

† Hitherto misnamed "*Vishnu Devale.*"

(*a*) "*Thúpáráma*."—By the close of the season in 1904 the partially fallen back wall of "Thúpáráma Viháré" was rebuilt in brick and cement, with concrete filling (lime, cement, and pebble), to a height of some 12 ft. from the floor. All vegetation was also rooted out from the walls; and the serious cracks temporarily protected from percolation of rain water by bricking them at top.

These precautions have prevented further damage ensuing to this fine brick ruin.

A fresh start was made this year (1906) in filling in the dangerous vertical cracks through the back wall, and continuing its inner face upwards until it should re-connect with the vaulted roof, open and unsupported, at the west end of the building. Here the soffit of the arched roof had lost a great number of voussoir bricks, and was holding only by the strength of the thick, tough, mortar used with the irregularly fixed bricks.

In widening the cracks sufficiently to permit of their being re-united from end to end, the interior of the walls revealed loose, disintegrated, lime concrete which crumbled to the touch. All this ancient "shoddy" core had, therefore, to be removed, augmenting the cracks into wide fissures in places (at one point 6 ft. by 5 ft. by 4 ft.), and very greatly adding to the labour of re-uniting the walls.

Before work closed for the year the three great cracks had been joined up, and the west wall rebuilt from the bottom to match the others, *i.e.*, first vertical, then gradually projecting as each course of bricks slightly overlaps the one below, and finally once more vertical at the level of the spring of the real arch of the roof.*

The broken end of the arch has been most carefully united to the back wall, as upon correct and strong junction here will wholly depend the permanent stability of the Viháré roof and its massy superimposed square tower, the north-west corner of which is also cracked.

It is proposed next season to deal with the remaining cracks elsewhere, and specially with the great crack which runs along the soffit axis of the arched roof.

But the roof and west wall of the "Thúpáráma" ruin are now practically safe for the time being with the work already done.

The narrow, veiled, staircase, 2 ft. in width, which pierced the south wall of the vestibule rising east had become so worn and dangerous that its immediate renewal was desirable. The steps were accordingly relaid in cement.

At the head of this staircase, was a very cramped landing at right angles, and further steps (all now broken away) which mounted west on to the flat roof of the Viháré. The almost total collapse of the vestibule's arch has left this part of the ascent exceedingly risky, and some safeguard must be provided.

---

* In all some 7,700 cubes of masonry have been so far rebuilt.

(*b*) "*Waṭa-dá-gé*."—In 1904 the following progress was made in the restoration of this magnificent specimen of Buddhist stone architecture :—

The north and east steps were relaid level. The latter had to be wholly taken down and reset, after filling in a deep tunnel which had been formed by the wash of years under the stone pavement of the upper floor round the central dágaba.

Along the north-east quadrangle the entire moulded revetment of the handsome stone stylobate, and the slab wall above it, were reset in lime mortar pointed with cement. Vegetation had pierced the joints and displaced most of the stones. The broken octagonal shafts of the stone columns, between the slab wall and the inner high brick wall, were also joggled, cemented together, and replaced.

Similarly, about two-thirds of the north-west quadrant was completed before the season of 1904 closed.

A portion of the undulating stone pavement of the circular *maḷuwa* round the stylobate required taking up and relaying in lime mortar.

Near the dágaba within the circular wall two more of the four cardinally seated granite Buddhas, found broken into many pieces, were neatly cemented.

The past season (1906) witnessed material advanced in the restoration of the "Waṭa-dá-gé."

The relaying of the pavement of the circular *maḷuwa* has been completed from the east to the west stairs on the north side ; the west steps, and the unfinished portion of the north-west stylobate, with its slab wall and column shafts, reset ; and the entire portico (walls, steps, pavement) on the north rebuilt.

Many of the pavement slabs are very heavy, and every stone has had to be lifted and relaid, the levels being so arranged that the slope is outwards and inclined to the *pili*, or spouts, which project through the *maḷuwa* revetment wall at regular intervals.

The west stairs had suffered terribly from fire, probably when the trees covering the site, felled in 1885–86, were foolishly burnt instead of being cut up. Both balustrades— the left (north) one especially—are spilt and their surface ornament (lion and pilaster) greatly damaged.

Fortunately the steps, "moonstone" slab at foot, and both *Nága dwarpal* terminals, remain intact. A good deal of earth and vegetation, which had crept in behind the steps and balustrades, had to be removed. It was necessary to raise, re-level, and make a fresh bed for the steps which had sunk, and to straighten the guardstones.

The revetment slabs of the "Waṭa-dá-gé" stylobate just north of the western staircase also bear sad traces of fire. They lay on the pavement in disorder, and had to be sorted, before being raised, and fitted piece-meal in their original places.

The portico on the north, through which the lower circular *maḷuwa* of the "Waṭa-dá-gé" is entered, was in hopeless ruin in 1903. The slab faced walls were then temporarily reset and

supported by log struts to prevent the heavy stone again falling. It was finally and well reconstructed last season.

The south-west and south-east quadrants of the stylobate will be, it is hoped, restored in 1907. Whilst the south-east quadrant is the best preserved of the four ; that to the south-west quadrant is quite the most damaged, and will need wholesale rebuilding from its original slabs, &c., lying about, greatly broken.

(c) "*Rankot Vehera" and "Kiri Vehera.*"—These the two largest existing Dágabas of Polonnaruwa are, on the whole, in excellent preservation.

In 1905 the bell (*garbha*) of both was freed of *ficus* and other trees, which had penetrated the masonry everywhere, and were gradually loosening the brickwork.

Towards the close of the past season (1906) attention was given to the square tee (*hatareṣ kotuwa*) and pinnacle (*kota*) of both Dágabas.

They were found to have suffered, not only from tree roots and vegetatior that had got firm hold of their wall surface, but from considerable corrosion as well, due to the south-west gale which beats fiercely upon them for five months of every year.*

It was desirable to affect repairs without delay.

These were carried out during October (after the still north-east monsoon set in). At the same time Mr. D. A. L. Perera, Head Draughtsman, Archæological Survey, made, as directed, sketches, and took full detail measurements of the *hatareṣ kotu* and *kot* of both Dágabas, to be drawn to scale when these Dágabas come to be dealt with by the Archæological Survey. It is hoped that next season Mr. Perera may be able to complete similar drawings of the several chapels, or offset altars, which stand round the base of the Dágabas.

Their true periphery will be ascertained by the survey of Polonnaruwa now in hand.

III.—*Sigiriya.*

Beyond the annual clearing of the citadel on the summit and of the terraces below the Rock, little work was done at Sigiriya in 1906.

The reduction of the Archæological vote for 1905 prevented arrangements being made for the usual supply of bricks, lime, and sand for the continued restoration of the " gallery," &c.

(a) "*Gallery.*"—With such materials as remained from 1904 the stairs were rebuilt last season as far as the foot of the iron ladders leading to the summit of the Rock.

---

* This " scour " is very noticeable also on the outer face of the "Thúpáráma" and Jetawanáráma" ruins at Polonnaruwa ; and at the Jetawanáráma Dágaba, Anuradhapura, is so advanced as to seriously endanger the stability of the pinnacle.

Some protection had to be afforded at the lowest ladder to ensure against accident on the narrow space where it rises from the steeply sloping sides of the ruined " Lion-staircase-house."

A four-feet half-wall was, therefore, built, curling round the ladder on the off side so as to unite with the Rock.

This necessitated swinging the lower ladder itself inwards at right angles to the Rock's face, and a small landing stage being added between it and the upper ladder.

(*b*) " *Fresco Pockets.*"—The netting in of the two " Fresco Pockets " was virtually finished in 1905.

The wire netting had only to be tightly stretched and screwed down, an iron frame door with padlock fixed, and the roughly laid floor of the caves smoothed in cement. Except the door, these few remaining touches were put to the work in the " pockets " during the short season at Sigiriya of 1906.

IV.—*Epigraphy.*

The lithic records of Ceylon are yearly disappearing owing to the invasion of its wilder parts by ignorant and unscrupulous treasure seekers, and their wanton destruction of inscriptions under the fatuous belief that these mark treasure spots.

In England Mr. Wickremasinghe has still to issue Part II. of the *Epigraphia Zeylanica.** Parts III. and IV. are also overdue. This slow progress justifies the Archæological Survey in collecting and storing material for future use before it is too late.

Nearly all the inscriptions of the North-Central Province have been eye-copied, and of the majority ink " squeezes " taken, as well as photographs where practicable.

But there is a vast field of epigraphical work almost untouched in the Northern, North-Western, Eastern, Central, and Uva Provinces, besides some records in the Western and Southern Provinces.

The Government has granted from 1907 a sum of Rs. 1,000 for the systematic work of copying yearly, until completed, of inscriptions throughout the Island, still unrecorded.

The overseer specially trained by the Archæological Commissioner for this work will tour through the several Provinces to make " eye-copies " and " squeezes " of all known inscriptions. As his work comes in, the " estampages " will be photographed ; and a permanent record thus preserved, to be utilized whenever desired.

V.—*Archæological " Finds."*

The large and varied collection of metal work and coins collected by the Archæological Survey in the course of fifteen years' work was overhauled, chemically treated (to prevent further corrosion), and docketed by the Assistant to the Archæological Commissioner in the course of the year.

---

* This Part has since appeared (1907).

The "Catalogue of Finds," prepared by Mr. Still, and an Album of photographic illustrations, have been handed over to the Director of the Colombo Museum, to be issued as a publication of that Department.

In December, upon the decision of the Government to transfer all portable "finds" made by the Archæological Survey to the Colombo Museum—there being no local Museum at Anurádhapura worthy the name—the greater part of the antiquities hitherto stored at Anurádhapura (stone carvings, bricks and pottery, metal work and coins, crystals, &c.), were sent down to Colombo. Mr. Still will arrange these at the Museum.

When the extension of the Museum building is completed, it is hoped that it may be possible to exhibit a more complete series of stone inscriptions than at present shown.

Many inscribed slabs and pillars are collected in Anurádhapura ready for transfer to Colombo.

PROSPECTS FOR 1907.

The following Papers have been received :—

1. Translation of "Barros and Couto on Ceylon," by Mr. D. W. Ferguson.

2. "The Discovery of Ceylon by the Portuguese," by Mr. D. W. Ferguson.

3. "Kandyan Music," by Mr. S. D. Mahawalatenna.

4. "Sumptuary Laws and Social Etiquette of the Kandyans," by Mr. T. B. Parnatella.

5. "Kandyan Medicine," by Mr. T. B. Bakinigahawela.

6. "The Origin of Tamil Vellalas," by Mr. V. J. Tamby Pillai.

7. "Joan Gideon Loten, F.R.S., the Naturalist, Governor of Ceylon (1752–57), and Ceylonese Artist de Bevere," by Mr. D. W. Ferguson.

8. "Notes on a Find of Eldings at Anuradhapura," by Mr. J. Still.

9. "Roman Coins found in Ceylon," by Mr. J. Still.

10. "Some Early Copper Coins found in Celyon," by Mr. J. Still.

11. "Nuwara-gala: Eastern Province," by Mr. F. Lewis, F.L.S.

12. "Portuguese Ceilao at the Beginning of the XVII. Century: A Sketch," by Mr. P. E. Pieris, M.A., C.C.S.

13. "The Age of Parakrama Bahu," by Mr. E. W. Perera, Advocate.

FINANCES.

The following is the balance sheet showing the receipts and expenditure of the Society for 1906 :—

Royal Asiatic Society, Ceylon Branch.—Balance Sheet for 1906.

Receipts.	Rs. c.	Rs. c.
Balance from 1905		92 47
Sale of Publications		70 21
Interest on Fixed Deposit (Rs. 2,000) ..		69 95
Life Membership Payments ..		157 50
Entrance Fees		63 0
Annual Subscriptions :—		
1902 ..	21 0	
1903 ..	31 0	
1904 ..	42 0	
1905 ..	175 81	
1906 ..	886 50	
1907 ..	35 25	
		1,189 56
Government Grant for 1905 ..		500 0
Donation by Dr. Coomaraswamy for prizes		60 0
Amount transferred from Rs. 2,000 in Fixed Deposit to Current Account ..		800 0
Total ..		3,002 69

Expenditure.	Rs. c.
Books Account	1,292 50*
Charges Account	372 71
Establishment and Salaries ..	312 50
Printing and Binding Account ..	548 41
Balance to 1907	476 57†
Total ..	3,002 69

* Including Rs, 1,125 for translation of Barros and De Couto.

† Beside in Fixed Deposit Rs. 1,218·22 (being balance Rs. 1,200 and interest Rs. 18·22), making total balance Rs. 1,694·79.

RONALD H. FERGUSON,
Honorary Treasurer.

8. Mr. D. B. JAYATILAKA proposed the adoption of the Report.

9. Mr. E. W. PERERA seconded.—Carried.

ELECTION OF OFFICE-BEARERS.

10. Mr. R. H. FERGUSON proposed that the following Office-Bearers be elected for the year :—

President.—The Hon. Mr. J. Ferguson, C.M.G.

Vice-Presidents.—The Hon. Mr. J. P. Lewis, M.A., C.C.S. Dr. A. Willey, M.A., D.Sc., F.R.S. ; and Mr. P. Freudenberg, J.P.

Council.

Mr. C. M. Fernando, M.A., LL.M.
Mr. A. M. Gunasekera, Mudaliyar
Dr. A. J. Chalmers, M.D., F.R.C.S.
Mr. C. Drieberg, B.A., F.H.A.S.
Mr. R. G. Anthonisz, Government Archivist.
Dr. W. H. de Silva, M.B., C.M., F.R.C.S.
The Hon. Mr. S. C. Obeyesekere.
The Hon. Mr. P. Arunachalam, M.A., C.C.S.
Mr. Simon de Silva, Gate Mudaliyar, Chief Translator to Government.
The Hon. Mr. G. M. Fowler, C.M.G.
The Hon. Mr. Justice A. Wood Renton.
Mr. P. E. Pieris, M.A., C.C.S.

Honorary Treasurer.—Mr. Gerard A. Joseph.

Honorary Secretaries.—Messrs. J. Harward, M.A., H. C. P. Bell, and Gerard A. Joseph.

11. Dr. A. NELL seconded.—Carried.

THE PRESIDENT'S SPEECH.

12. The PRESIDENT :—It is my pleasing duty once more to return thanks in the name of the Office-Bearers of the Society for the honour you have just conferred in unanimously electing us to our several posts. We all trust that the minor changes made during the year may tend to the increased usefulness of our Society.

We begin the year with 213 members—a number which compares favourably with that of the Asiatic Society of Bengal, which has 407 on its roll.

We, in Ceylon, have certainly had great encouragement of late in the number of acceptable Papers made available, there being no fewer than thirteen, as you have heard, ready for reading.

One by Mr. D. W. Ferguson of Croydon, now in the hands of the printer, is on the "First Discovery of Ceylon by the Portuguese in 1506," and was sent out by the author so far back as May last, but we regret could not be read or disposed of, so as to be included in our volume for 1906, to which, of course, it properly belongs. The death of the Government Printer and some difficulty in deciding about fitting illustrations in the absence of Mr. Harward and myself in England caused delay.

Another important work undertaken by the Society, and shortly to become available, is Mr. Ferguson's annotated translation of the parts of Barros and de Couto's History of Portuguese India bearing upon Ceylon.

I regret to say that it has not been possible for me to complete the second and more practically important part of my Paper on "The Coconut Palm in Ceylon: Its Spread and Cultivation in Dutch and British Times;" but I have a mass of material well in hand, and must hope to overtake the compilation during the present year.

Meantime, it is a matter for congratulation—thanks to the energy of our Editor, Mr. H. C. P. Bell, and of his co-Secretaries, Mr. Harward and Mr. Joseph, and of the ready co-operation of the Government Printer, Mr. Cottle, and his *locum tenens*, Mr. Richards —that, for the first time in our history, I believe, the Journal for the past year has been published immediately after its close, and copies placed in the hands of Members before the Annual Meeting.

I referred last year to the need of a full and final anthropological investigation in reference to our wild or cave-dwelling Veddas, and to the regret felt that the Cambridge "Anthony Wilkins" student had to go to the Andamans in place of coming to Ceylon. Since then we have been interested to learn of the re-arrival here of the Messrs. Sarasin for further investigation, and still later of a Lady Professor, Madame Selenka, from the Berlin Academy of Sciences, with a competent Assistant in Professor Moszkowski to make such study of the Veddas as time and opportunity will permit before going on to Java. I learn from our Secretary, Mr. Joseph, that he was able to place the Lady Professor and her Assistant in communication with Mr. Herbert White, Government Agent of Uva (a Member of our Council) and with Mr. E. F. Hopkins, Agent for the Eastern Province, both of whom have promised to give every possible assistance in studying the manners, customs, ceremonies, and language of the Vedda. Although fifteen years ago the brothers Sarasin conducted their researches in Uva, below Lunugala, it is now considered that there are few or no genuine Veddas in this Province, they having intermarried with the villagers. Our present visitors are therefore to pass into the Eastern Province to two or three points where the officials consider some real, unsophisticated Veddas are still to be found. We trust success will attend the scientists efforts, but clearly the time at their disposal will prevent exhaustive final work, and it is a question worthy the consideration of the Council of this Society as to whether the Ceylon Government should not be moved to originate a full investigation ere it be too late for ever.

It is very satisfactory to know that since I last addressed you it has been decided that Colombo is to have a proper well-equipped Observatory as befits its position as the great and most central Port in the Indian Ocean. We are also rejoiced to see that the urgent indispensable work of extending the Museum building—on the design approved by Mr. Smither—is to be taken in hand this year, a vote to account of Rs. 40,000 having been passed and the site having been already marked out. It is quite clear that all the

additional space provided will be most fully in demand—indeed already, I believe, some of our friends of the "Ceylon Society of Arts" are wondering if space could be made in the Museum building for a limited collection of paintings, if such should be brought together, as the nucleus of a future national collection. The Members of this Society, I feel sure, will be in full sympathy with this aspiration; but whether the space can be made available is another matter to be considered hereafter.

In view of a recent decision of the Council of this Society, on an application from Government, it is satisfactory to have an opinion from Mr. D. W. Ferguson by a recent mail to the effect that "It will be a thousand pities if the Ceylon Government do not wait for Dr. Geiger's edition of the *Mahawansa* before printing a new edition of the English translation. Wijesinhe's edition"—he adds—"is utterly inadequate."

This Society may well take an interest in the completion of Dr. Herdman's great work on our Pearl Oyster Fisheries, Parts IV. and V., having appeared since I referred to the subject in my last year's address. The great permanent value of the large number of reports by the great experts of the day on the Marine Biology of Ceylon cannot be over-estimated, and the Government as well as the Royal Society may well be congratulated on the result. Mention should be made of the "Finds" of the Archæological Survey brought to the Museum during the past year and filling no fewer than three cases. Photographs of the same lie on our table to-night; but all who possibly can should make a point of examining the originals, which make a valuable addition to the Museum Collection. In the Museum generally progress has been made; but more room is the urgent need. The headquarters of the Mineralogical Survey are now in the Museum, where Mr. Parsons and his Assistant work. There are several bits of useful work before the Members as yet untouched; but for this I must refer to my address in last year's Journal.

Meantime, with reference to Mr. Bell's long and able summary of his archæological operations, just read to us, I wish to direct attention specially to one point, namely, the wholly inadequate vote made by Government at present for *restoration* work. This is, I believe, only Rs. 5,000 in all, whereas the Indian Government votes for this single purpose Rs. 132,500, or about double the total Archæological Survey vote for Ceylon. Now the small sum allowed in Ceylon is becoming a serious question from a practical point of view, and for this reason Mr. Bell who, for eighteen years has devoted himself with so much enthusiasm to this archæological work, is getting on in years; his time for pension is, in fact, within sight, even if the Government, as we hope it may, secure his services as Archæological Commissioner until 1911, when he will be sixty years of age, or why not indeed (as Mr. Bell is still hale and hearty) until 1916. But the point is, that it will be a thousand pities if the Ceylon authorities do not make the fullest use of Mr. Bell's great experience and ardour, during whatever time remains for him at his present work, by enabling him to supervise far more extended works of restoration. With Rs. 5,000

he can only continue at Sigiriya and restore one or two ruins at Polonnaruwa; but if this annual vote were increased, say, to Rs. 25,000 or even Rs. 20,000 for the next few years, the necessary work of restoration could be got through at an accelerated pace at Polonnaruwa, at Anurádhapura, and at some other places, before the invaluable experience, gained in the past score of years by the present Commissioner, is lost to us. I sincerely trust that Sir Henry Blake may be able to make this provision in His Excellency's next Supply Bill as a truly wise and economical as well as most desirable mode of forestalling what must be regarded as inevitable expenditure at some time or other.

I began by congratulating you on an increased roll of members, 213 as compared with 407 for Bengal; but when we realize how much more of useful work the Society could do (in getting further translations or annotated editions of old works, or reprinting past Journals now out of print, and in printing papers bearing on Ceylon in other Society's transactions) if funds were only available, and when I mention to you that the Bengal Society had a credit balance a few weeks ago, of more than ten times the amount in our hands in Ceylon, I would plead for further support to our Society. I think, for instance, that every intelligent Member of the Public Service of a certain status (as well as of the general community) ought to belong to the Society, with a view to learning as much as possible of the history of the people and of the land we live in, and so securing that sympathetic insight and local knowledge which cannot fail to re-act beneficially in many ways on the discharge of public duties.

13. Mr. Harward next read the following Paper by Mr. F. Lewis on "Nuwara-gala: Eastern Province." Printed copies of the Paper with illustrations were distributed to the audience.

NUWARA-GALA, EASTERN PROVINCE.

By F. Lewis.

About the middle of 1906 I had occasion to examine the forests to the south of the Badulla-Batticaloa road in connection with forest matters. I had with me the excellent topographical maps prepared by the Surveyor-General to assist me in the location of certain points. Among others a large group of hills is shown to the southward of Maha-oya that from their situation indicated that as a whole they were of importance with respect to water supply to a system of irrigation works further to the eastward. I decided therefore to make a preliminary inspection of this cluster of mountains, and with that object in view I arranged a short expedition in company with my Forest Ranger, the Ratemahatmaya, and the Arachchi of Pollebedda village.

Starting from the Maha-oya resthouse, we first crossed the dry bed of the oya of the same name, and proceeded through a very superior forest for about six miles, when we reached a little tank that the Arachchi explained was for the irrigation of a small plot of fields owned by the people of Pollebedda.

We reached these fields by about 11 A.M., and camped for breakfast on the banks of the Rambukkan-oya, that at the time of my visit was perfectly dry. This is a broad stream when in flood, and takes its rise beyond the group of hills called Sitala Wanniya, which I shall have reason to mention later. The banks of the stream are lined with a curious mixture of plants, leading me to suspect, on finding the green bamboo and enormous dadap trees, that they were "escapes" from earlier plantations and inhabited lands.

After breakfast we followed what seemed to be a "game path" that ran eastwards, through very large high forest, broken here and there with large masses of rock. After

Map
SHOWING POSITION OF
NUWARAGALLA
REFERENCE.
A..B. Approximate position of Bund of Maha Watawala Kandiya Tank.
C.....Stone Channel.
D.....Ruins at Nuwaragalla.
Scale, 1 Mile to an Inch
To Batticaloa
Pullumalai
Kuda Siyambalagakandiya
Maha Siyambalagakandiya
R.H.
Maha Oya
Badulla
Stream
Pulavalli Aru
Badirakaka Oya
Rambakan Oya
Ponathuna W.
Akulabay
Kinley Oya
Maha Oya
Hingurana Ela
Pollebedda
D. Nuwaragalla
C
A
B
Sitala Wanniya
Magalavalan Aru

S.G.O. No 20/07.

BRITISH MUSEUM NATURAL HISTORY

following this path for about two hours I noticed that there were occasional traces of large blocks of stone that at an early stage appeared to form into a sort of line, and upon a distinct fixed inclination.

Following this for about half a mile further, the ground began to show signs of being steeper and more rugged, while the above-mentioned stones correspondingly became more and more wall-like, till at last it was obvious that they supported the path I was following. This form of structure now began to become more and more elaborate, as the path followed up into a mass of rocky hills, terminating in a sort of dead end.

Here the road made a zig, and the walling correspondingly presented a deeper and broader surface as we climbed along the edge of a huge mass of rock. The path now becomes entirely built of large close-set masses of rough broken stone, but so perfectly have the stones been laid, both as regards gradient and position, that one could ride a horse along the path if the branches of overhanging trees were only removed.

After making a few more zig-zags that were rendered necessary by the bends or hollows of the rocky mass that the path climbs, it became quickly evident that we were well above the plain, that now lay far below.

It was also apparent that we were climbing a huge mass of precipitous rock, standing out like a vast column from among its smaller brethren. On one side the rock is vertical or nearly so, and as soon as the angle of the slope became very high the path zigged back towards the flatter surface, seizing as it went all points of advantage in formation or surface. At one particular spot I found what at first sight looked like sockets cut into the living rock for a doorway, but after later consideration I have reason to suppose that this doorway was for a huge block-house constructed for a special purpose to defend a weak point. Near these sockets are a number of steps cut into the rock to enable one to take a short cut up the rock without continuing along the more even line of constructed roadway.

Following the road, I found that we were getting on to a shoulder of bare rock, and here the path branched, one portion still rising, while the second or lower track passed through a slight gap and entered upon a ledge, below which the rock was, roughly speaking, vertical for approximately 800 feet. The ledge at this point is on one's left-hand side, and it quickly opened into a magnificent cave measuring 118 ft. by 25 ft., capable of easily accommodating at least 100 people. The mouth of the cave has a full and elaborately cut drip ledge, and also an inscription.*

The drip ledge in this case has, to me, the peculiarity of having a bending the purpose of which I presume is ornamental only. Several sockets are cut in the rock that forms the roof of the cave, and probably were for the purpose of forming a wall on one side to shut out the wind as well as rain and to form partitions. From the mouth of the cave one has a magnificent view of the mountain known as Kokka-gala, overlooking the little village of Kallodai, where the present cart road to Badulla crosses the old military (?) road that traversed the base of the Uva country, which reached Tissamaharama on the south and the Madura-oya on the east.

The object and purpose of this road is not, as far as I am aware, made known in any of our historical records, but it is impossible to avoid the conclusion, both from its general trend of direction and its size and stability of construction, that this was the highway from Tissamaharama to Polonnaruwa, or, in other words, to connect Ruhunu-rata with Pihiti or Raja-rata.

Such a road could be of commercial value, while equally it could be of strategic importance, and I am inclined to believe that perhaps the latter object was more in view while it was in course of construction, than the former. This road, it will be observed, followed the base of the Uva hills, and after

---

* [The defective copy sent with the Paper appears to read: *Devanapiya Maha Rajaha Gamini Tisahaputa Maha Tisa ayaha lene saga*(*sa*).—B., *Honorary Secretary*.]

reaching Kokka-gala, its course lay more or less through open country. This had its dangers as well as objections. In an open country the road could be attacked from both sides, while in the case where it followed the sides of hills the hills alone afforded protection.

In considering Nuwara-gala as an outpost, it is important to bear this in mind, more especially as Kokka-gala was a high point overlooking the spot where the road debouched from the hills into the plains. This point too was weak from the south and east, as for forty miles eastward lay a Tamil country, flat, easily crossed, and backed by the sea, together with the large lagoon at Batticaloa.

Kokka-gala therefore offered one outpost, but taken in conjunction with Nuwara-gala as the last outlying natural fort to the east, its value became supplemented greatly, because from Nuwara-gala's lofty summit the movements of hostile parties or troops moving inland from Puliyantivu, or along the east coast, could be all the sooner seen and watched, and the observations signalled across the eight miles of valley between, to Kokka-gala, giving time for defenders to be placed on the road I have just mentioned at its place of extreme weakness. An enemy advancing from, say, Batticaloa could be watched for some days from Nuwara-gala, and their movements signalled to Kokka-gala, and at once the outlet of the road could be guarded, and in all probability the base of the supply—Tissa—speedily communicated with; but so far this may be considered as pure theory in the absence of further support by internal evidence.

This I propose to describe more fully. Returning once more to our cave near the western summit of Nuwara-gala, we proceeded to follow the rising path. This now gets on to pretty nearly flat rock, and I found that in one place, in full command of a perfect view of Kokka-gala, there was a circular hole of about 7½ inches in diameter drilled into the solid rock itself. I take it that this afforded a socket for a mast or signal post of some kind, possibly a beacon.

Passing by this, one finds that all the little undulations in the surface of the rock are dammed across, so as to catch water, till suddenly one alights upon a magnificent *pokuna* cut out of the living rock, measuring 77½ ft. by 58½ ft. by about 5 ft. in depth, full of sweet water.

The sides are perfectly cut, and the whole is a triumph of stone cutting, for the rock at this point is completely solid. Small deflecting bunds still exist, which directed the rain water into this perfect tank, till difference of level rendered them inoperative.

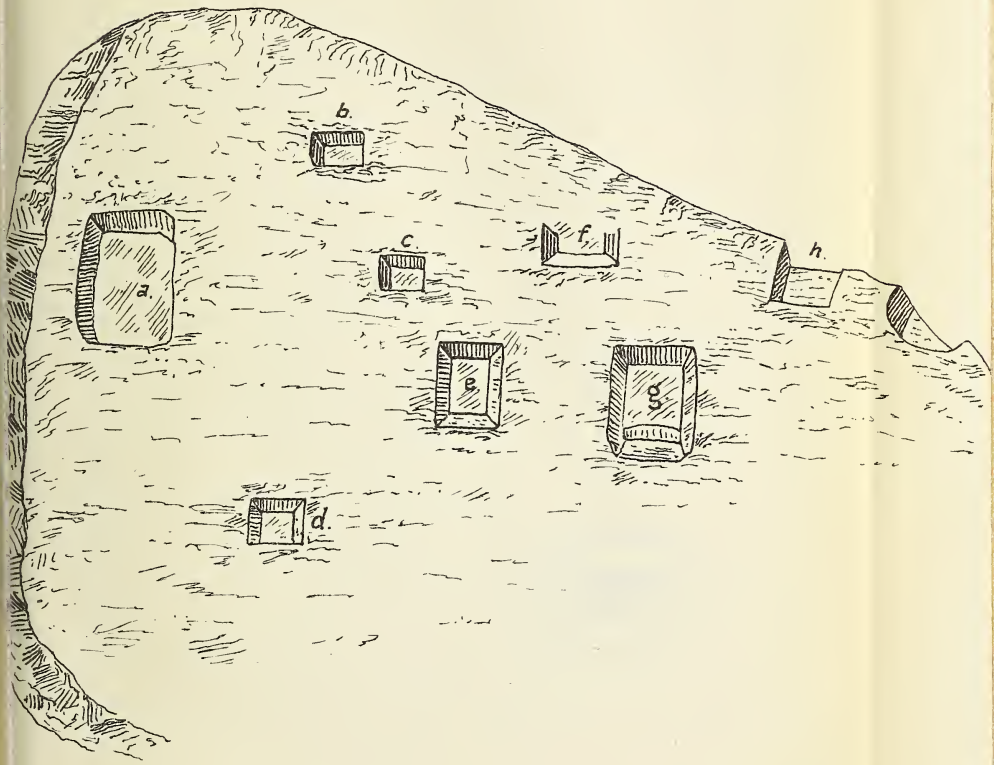
Leaving the tank or *pokuna* to the south-west, one finds the rock rising slightly into a densely wooded summit. Here one finds the remains of a huge fort-like building with stone walls. I was unable, as I was unprepared at the time, to make a detailed survey of this building, so as to gather its particulars of exact outline, but measured at hazard it appeared to be about 440 ft. long by 385 ft. wide and divided into an outer and inner series of outposts. At certain intervals I found passages through the walls with one that formed what I call a baffle doorway. The door frame was evidently a mixture of wood and stone, the sills indicating a baffle system, as the sketch will show (fig. 1). It will be seen that there is a double series of mortice holes, the larger facing the outer side of the building, and the smaller the inner.

It suggests itself to me that the position and relative sizes of the mullions would effectively afford resistance from the inside, while admitting both light and air, and also a hindering "baffle" from within, so that before a would-be invader could get a direct blow at the defender on the inside, the former would have to squeeze his way through a double phalanx of posts.

This building or fort that I speak of commands the very summit of the mountain, and is approximately 1,200 feet altitude. From it one can get an unbroken sweep of view from the Tamankaduwa hills on the north to Arugam bay in the south-east. To the east Batticaloa is clearly seen, and of

Fig. 1

Nuwaragalla. Baffle doorway.



Sizes

a = 14" × 12" × 4½" deep
b = 7" × 6½" × 3" "
c = 5" × 5" × 3" "
d = 6" × 6½" × 3" "
e = 12" × 12" × 5" "
f = 6" × 6" × 4½" (front open)
g = 12" × 12" × 1½" with a second step
h = 7" × 6" deep
i = 11" × 6" deep, broken away

S.G.O. No. 22/07.

BRITISH MUSEUM NATURAL HISTORY

course the sea line. Away to the southward stands Sitala Wanniya and a precipitous mass of vast rocks. Westward, again, one sees the Uva hills, and to the north-west the mountains that cluster around the eastern confines of Rangalla, in fact a perfect spot from which to view the eastern side of the country.

I found several more or less broken monoliths of dark stone, but nowhere did I see any trace of Buddhistic import, either as *puja-gal*, *rupa*, or *karandu-gal;* the place looked grimly fortification-like, and severely strong in natural as well as artificial protection. The commanding position, the solidity of structure, the natural difficulties of approach, combined with the elaborate design for the conservatism of water supply, leave a particularly convincing impression on the mind that this could be no place of pious retreat only, coupled as it is with a striking absence of shrines. The water supply arrangements would serve probably 1,000 people, if not more. This could hardly be necessary for a handful of priests, especially when nature had planted a fort that could lend its aid to guard a great arterial path creeping along the outskirts of a probably unsubdued country, that at that time was possibly inhabited by the Yakkus, or Veddas, that the Sinhalese never really subdued.

My time and means did not admit of excavation. This must in time, when made, reveal the object and purpose of Nuwara-gala, that I venture to suppose was a military stronghold, to which the cave added a suitable *annexe* for devotional purposes.

I mentioned in the earlier part of this Paper that I observed what I believe to have been a guard-gate or block-house. It may be desirable to describe this structure. I found certain steps and slots cut in the living rock that would admit of beams being placed at a high angle just sufficient to cover the road, especially as they were probably jointed to horizontal beams placed at an angle with the sloping rock.

These beams again could be cross-braced and made to carry an enormous load, or roof of stone, that undisturbed would, by weight alone, serve to make a rigid enough covered way, and but by inserting either a wedge or a lever behind any of the transverse beams, the whole could be canted forward to a dangerous angle, the least addition to which would overset the whole and crash down upon the road far below, sweeping it away or blocking it in its fall. A trap, in fact.

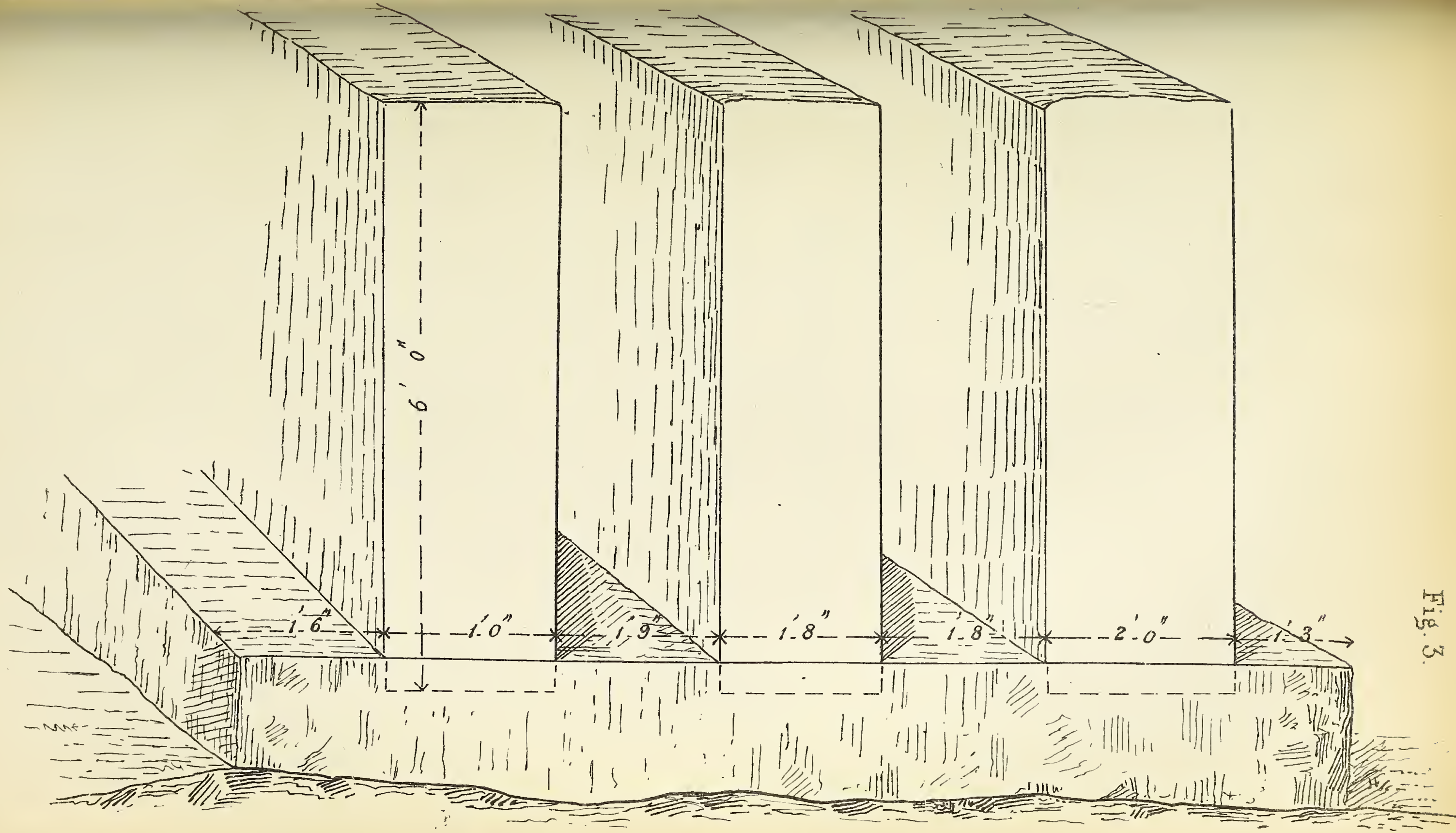
This would hinder all possible means of ready ascent from below, because at this point the road crosses a ravine, and is built up on rock ledges by a sort of connecting wall. Assuming this theory of construction of a block-house or barrier is correct, I submit that a further evidence in support of the idea that Nuwara-gala was a fortification is strengthened, though certain groovings in the rock require elucidation.

I mentioned that on my way to this fine point of rock I first came to a place called Pollebedda. I was informed that not far from it was a great stone work, and the remains of a vast tank. Accordingly on my return I proceeded to examine both.

The stone work appears to have been an incompleted channel or aqueduct constructed on a most magnificent scale. The work has been constructed out of enormous slabs of split or wedged stone, placed like a letter ɯ laying along its back (see fig. 3).

The stones so laid are jointed together at their ends, besides being let into or morticed to the bedwork. Placed as they are, two parallel channels run dead true for 366 feet, and hardly a stone is out of place, notwithstanding the fact that the whole is within a mass of high forest. An idea of the magnitude of the work can be gained by considering the size of the individual pieces of stone that form the whole. For example, slabs 20 ft. by 6 ft. by 2 ft. 6 in. are abundant, while some are even longer, but taking these figures as typical, such a stone would contain 300 cubic feet, and would weigh probably between 23 to 25 tons !

Fig. 3.



End view of Maha Watawala Kandiya Channel.

S. G. O. No. 23/07.

It is very significant that the measurements of the stones cut for this aqueduct and their other specifications as regards widths, distances apart, &c., all have a most remarkable analogy to our systems of measurements. For example, I found measurements to follow closely the order of a foot divided by 2 or 3 ; thus, I got 1 ft. 2 in., 1 ft. 4 in., 1 ft. 8 in., and 1 ft. 10 in., or by the second system of division I got 1 ft. 3 in., 6 in., 9 in., &c. In no case did I get a compound figure such as 1 ft. 7¼ in. I attach a table of slab measurements in illustration.

List of Stone Measurements.

Maha Wattawalla Kandiya Channel.

Length.		Width.		Thickness.	Length.		Width.		Thickness.
Ft. in.		Ft. in.		Ft. in.	Ft. in.		Ft. in.		Ft. in.
11 6	by	6 0	by	2 6	17 0	by	6 0	by	2 8
16 6	by	6 0	by	1 3	17 0	by	6 0	by	2 8
11 0	by	6 0	by	2 9	23 0	by	6 0	by	2 6
10 0	by	6 0	by	2 9	10 3	by	6 0	by	2 8
13 6	by	6 0	by	2 9	8 2	by	6 0	by	2 6
15 0	by	6 0	by	2 8					

One row numbered twenty-nine stones, of which the smallest was 8 ft. 2 in. by 6 ft. by 6 ft. This peculiarity may have significant bearing on our standard of length, as I can hardly suppose that it could be only a mere coincidence.

Again, the length of the channel, even in its seemingly unfinished state, has a curious relation to the number of days in the year or leap year, but I do not venture to advance any theory on this point.

The tank that lay beyond the stone channel just referred to is known as Maha Wattawalla Kandiya. If it ever was completed, its object was to hold back the waters of the Rambukkan-oya, when that stream was in flood, and to distribute the same later.

The bund is beautifully pitched with stone, and at the breach (?) measures 107 ft. from the summit to "floor level" along the inclination of its surface. The top of the bund is in places over 50 ft. wide. The area along the water line I am unable to state without a contour survey, but probably it ran into some thousands of acres. I find no trace of a sluice.

The question now arises as to the date of the inscription over the cave at Nuwara-gala.

It is uncertain who the particular Devanampiya Tissa mentioned in this inscription was. If the 7th monarch, the inscription goes back to about 300 years before the Christian era. I am under a debt of obligation to Mudaliyar Simon de Silva, to whom I submitted a copy, for his translation. Upon the assumption that "Devanampiya Maha Rajaha Gamini Tisa" is identical with the sovereign in whose reign the revered bo-tree of Anurádhapura was introduced, and that "Maha Tisa" was his son,* it is fair to assume that the date of Nuwara-gala must be somewhere between 275 and 307 B.C., allowing, that is to say, that Maha Tissa had reached manhood at the time of the establishment of this stronghold.

The inference that the cave was a devotional *annexe* to the fort is based on the inscription which indicates that the *lena* (cave) was "common to the priesthood," but I think that the inference is permissible, taking situation and surroundings into consideration, and that the larger artificial building already referred to was the primary structure, to which the cave became subordinate in point of importance. This point, however, must be left to a later period, when expert archæological explorers will be in full possession of detailed material to establish or demolish what I now respectfully beg to advance as a theory.

I may add that I think that it is exceedingly probable that Nuwara-gala may be found to be only one of a number of

* [The assumption is not borne out by the *Mahawansa*.—B., *Honorary Secretary*.]

natural forts for the protection of Ruhuna, or for the subjugation of the Yakkus, whose stronghold lay between the chain of hills that include "Westminster Abbey" and "Friar's Hood" and the base of the Uva mountains—a country that to-day is said to be the haunt of the real Vedda.

It remains only for me to say that in submitting this Paper to the Society I do so with considerable hesitation, as I cannot cite any historical grounds for pitching upon Nuwara-gala as an outpost, and I must leave my conjectures to sink or swim upon the facts as already outlined and the proofs which further and expert investigation will undoubtedly evolve.

NOTE.

Mudaliyar Simon de Silva writes as follows :—

"Mahatisa, the son of Dewana-piya Maharaja Gamini.

"Devanpiya means 'beloved of gods,' and may be applied to any king. In this place the name of the king is Gamini (Gẹmunu), known also as a Dutu Gẹmunu. Descendants are sometimes called sons, but I would rather think Maha Tissa in this inscription is a relative of Dutugẹmunu." [161 B.C.]

Note by Mr. H. Storey.

Referring to Mr. Lewis's excellent paper on Nuwara-gala, I see he does not refer to the fact that this curious hill was reported on by Mr. Halliley of the Survey Department in the Surveyor-General's Administration Report of 1900.

As regards the stone "conduit" near the ruined tank near Pallebedda, I think it will be found to be merely an unfinished "sluice culvert," and that the tank in question was never completed, hence the non-finding of any sluice. This is not the only case of the kind : I have myself seen unfinished tanks, half-built temples, and such-like. There is certainly in existence in the Eastern Province a perfect specimen of a similar case in which a tank bund is complete but for the sluice ; and this sluice chamber, culverts, &c., complete, lies "set up" some little distance away from its intended position in the bund ; thus showing that the ancient builders undoubtedly "fitted" their work complete before

removing it to its final bed. In the case mentioned by Mr. Lewis all that is missing seems to be the covering stones. The ш shape is due to the fact that all outlet culverts of big tanks had double channels.

THE DISCUSSION.

14. The PRESIDENT, at the closing of the reading, said it would be of interest to have the subject discussed.

15. Mr. C. M. FERNANDO thought it would be a poor compliment to Mr. Lewis should there be no discussion on so interesting a Paper. Mr. Lewis seemed to hesitate between the two theories, as to whether Nuwara-gala was a hermit's abode or a military outpost. Mr. Fernando saw no reason why both these theories should not be correct. Judging from the fact referred to in the Paper that the Rock commanded the road to Polonnaruwa, it seems to have been used as a military outpost in the time of Parakrama the Great, who is celebrated for his military fortifications. He reigned 1,000 years subsequent to Dutthagamini.

16. Mr. E. W. PERERA said: A good deal of light may be thrown on the history and origin of Nuwara-gala by a reference to some of the lesser known chronicles of Ceylon, such as the *Thúpawan̥sa* and *Dhátuwan̥sa*. Both these chronicles contain valuable information about the settlement of the southern and south-eastern districts of the Island not contained in the *Mahawan̥sa*. The *Dhátuwan̥sa*, probably founded on an old Páli work, gives an account of the settlement of the district round Batticaloa and the names of the princes who founded cities and vihares in those parts. It deals with the period *circa* 200-100 B.C., and includes the reign of Kawantissa with references to the early youth of Dutugẹmunu. Pridham has given a brief *resumé* of this chronicle in his work on Ceylon. The *Mahawan̥sa* too proves that the Batticaloa Ḍistrict was one of the earliest and most flourishing Sin̥halese settlements, with its capital of Digamadulla identified by Turnour as Digavẹwa. (*Mahawan̥sa*, chapters IX., XXIV., XXXII., XXXIII.) He was inclined to think that Nuwara-gala was an early stronghold belonging to the period of the wars of Elála and Dutugẹmunu.

17. The PRESIDENT said that the discussion opened up some interesting points which might well be the occasion for further inquiry and investigation. They were all apt, he thought, to overlook and forget the great importance of the Eastern division of Ceylon in ancient times: how, for instance, the town of Bintẹnna is older even than Anurádhapura, while Ptolemy gave it as the capital of Taprobane beside the great river Mahavẹli-gan̥ga. It is possible, too, that in early days the Mahavẹli-gan̥ga, before it divided into two branches, forty miles from the sea, may have been navigable far inland. Governor Wilmot Horton had it examined and reported on for navigation, and it was considered that for 80 miles to Kalinga it could be made navigable. Valentyn states that so late as 1700 the kings of Kandy had ship and boat

building works at Bintẹnna. Now the old road from Kandy through Bintẹnna to Batticaloa must have passed close to Nuwara-gala and Maha-oya. Bintẹnna was a military station in 1817 and for some time after. He was much struck by the facts brought out by Mr. Lewis as to the commanding position of Nuwara-gala, 1,200 ft. high in the midst of a flat expanse, and commanding a view from Tamankaḍuwa to Arugam Bay and from the Raŋgala and Uva hills away to the far south. Here was the great Vẹddá and sporting country which, if taken to be 80 miles long by 40 wide, could occupy 3,200 square miles, or nearly one-eighth of the whole area of Ceylon. A more modern interest would now attach to some parts of the neighbourhood if the rich valley of the Mahavẹli-gaŋga at different points became the scene of rubber cultivation, as had recently been hinted at. In any case they had to thank Mr. Lewis for a very interesting and suggestive Paper, and he proposed that a hearty vote of thanks be carried by acclamation.

18. Mr. Freudenberg proposed a vote of thanks to the Chair.

19. The coloured paintings and photographs attracted general interest, and were carefully inspected by those present, Mr. D. A. L. Perera, Head Draughtsman, Archæological Survey, being freely interviewed and complimented.

The album of "Archæological Finds" laid on the table also attracted attention.

COUNCIL MEETING.

Colombo Museum, May 30, 1907.

Present :

The Hon. Mr. John Ferguson, C.M.G., President, in the Chair.

Mr. R. G. Anthonisz.
The Hon. Mr. P. Arunachalam, M.A., C.C.S.
Mr. C. M. Fernando, M.A., LL.M.
The Hon. Mr. S. C. Obeyesekere.

Mr. J. Harward, M.A., and Mr. G. A. Joseph, Honorary Secretaries.

Business.

1. Read and confirmed Minutes of Council Meeting held on February 8, 1907.

2. Resolved that the following candidates be elected Members of the Asiatic Society :—

(1) H. F. C. Fyers: recommended by { (*a*) G. A. Joseph. (*b*) J. Still.

(2) P. A. Goonaratna: recommended by { (*a*) S. B. Kuruppu. (*b*) A. W. Wijesinha.

(3) T. E. Goonaratna: recommended by { (*a*) S. B. Kuruppu. (*b*) A. W. Wijesinha.

(4) W. T. D. C. Wagiswara: recommended by { (*a*) H. Sumangala. (*b*) W. A. de Silva.

(5) Rev. R. P. Butterfield: recommended by { (*a*) J. Ferguson. (*b*) G. A. Joseph.

(6) S. G. Koch: recommended by { (*a*) J. W. Vanderstraaten. (*b*) G. A. Joseph.

(7) T. Harward: recommended by { (*a*) J. Harward. (*b*) G. A. Joseph.

(8) L. S. Woolf, B.A., C.C.S.: recommended by { (*a*) G. D. Templer. (*b*) G. A. Joseph.

(9) M. A. C. Mohamed: recommended by { (*a*) S. G. Lee, M.A. (*b*) G. A. Joseph.

(10) J. Hornell: recommended by { (*a*) A. Willey (*b*) G. A. Joseph.

(11) A. H. Fernando: recommended by { (*a*) F. H. Modder. (*b*) G. A. Joseph.

(12) A. E. Roberts: recommended by { (*a*) F. H. Modder. (*b*) G. A. Joseph.

3. Laid on table Circular No. 248 of September 1, 1906, containing the opinions of the Hon. Mr. P. Arunachalam and Simon de Silva, Mudaliyar, on the translation of a Tamil Paper entitled "The Origin of the Tamil Vellálas," by Mr. V. J. Tamby Pillai.

Resolved,—That the translation be accepted on the condition that Mr. Tamby Pillai do obtain the permission of the original writer and the Editor of "Shen Tamil's" to allow the translation to appear in the Society's Journal.

4. Laid on the table Circular No. 18 of February 5 last containing the opinions of Messrs. C. M. Fernando and P. E. Pieris on a Paper entitled "Some early Copper Coins," by Mr. J. Still.

Resolved,—That the Paper be accepted and be read at a Meeting and published in the Society's Journal.

5. Laid on the table Circular No. 25 of February 11, 1907, containing the opinions of Messrs. J. Harward and J. P. Lewis on the Paper entitled "Portuguese Ceilão," by Mr. P. E. Pieris, C.C.S.

Resolved,—That in view of the suggestions of the gentlemen to whom the Paper was referred Mr. Pieris be asked to revise the Paper in the direction indicated, quote his authorities, and modernize proper names.

6. Laid on the table Circular No. 40 of February last containing the opinions of Messrs. R. G. Anthonisz and F. H. de Vos on a Paper entitled "Joan Gideon Loten, F.R.S., the Naturalist Governor of Ceylon (1752-7), and Ceylonese Artist de Bevere," by Mr. Donald Ferguson.

Resolved,—That the Paper be accepted, read, and printed in the Society's Journal, together with Messrs. R. G. Anthonisz's and F. H. de Vos's Memoranda.

7. Considered the desirability of sending the Society's Journal to L'Ecole Française D'Extreme Orient, Hanoi, who have sent their Journal continuously from 1901.

Resolved,—That L'Ecole Française D'Extreme Orient, Hanoi, be put on the exchange list, and do receive the Journal from this year.

8. Laid on the table English translation of the Prize Essay on "Kandyan Medicine," by Mr. T. B. Bakinigahawela.

Resolved,—That the opinion of Dr. J. Attygalle (senior) be solicited in regard to the value of the Paper; and that with this opinion the question of publishing the Paper in the Society's Journal be left to the discretion of Mr. H. C. P. Bell, Editing Secretary.

9. Laid on the table a Paper entitled "The Age of Sri Parákrama Báhu VI.," by Mr. E. W. Perera, Advocate.

Resolved,—That the Paper be referred to the Hon. Mr. P. Arunachalam and Mr. C. M. Fernando for their opinions.

10. Read a letter from Dr. A. Willey, F.R.S., resigning the Membership of the Council and of the Vice-Presidency of the Society.

Resolved,—That this Council do convey to Dr. Willey the expression of their hope that he will allow his name to remain as a Vice-President of the Society.

11. Read a letter from the American Oriental Society asking for past Numbers of the Journal.

Resolved,—That the Society be sent any number of the Journal asked for of which there are more than six copies in stock.

12. The Hon. Mr. P. Arunachalam brought up the question of the compilation of a proper Gazetteer of Ceylon.

Resolved,—That the Hon. Mr. Arunachalam, Messrs. C. M. Fernando, J. Harward, and P. E. Pieris be asked to consider the matter and inform the Council.

13. The Chairman raised the question of asking the Government to increase the subhead of the Archæological Survey on account of "Restoration and Preservation of Ancient Structures" from Rs. 5,000 to Rs. 20,000 in order that the work may be pushed on during Mr. H. C. P. Bell's tenure of office as Archæological Commissioner.

Resolved,—That it be left to the President, the Hon. Mr. J. Ferguson, to approach His Excellency the Governor on the subject.

14. The Chairman pointed out the necessity for taking immediate steps to obtain a Scientific Report on the Vẹddás, and the desirability of securing the services of Mr. Brown of Cambridge University, an expert now engaged in Anthropological Work in the Andamans.

Resolved,—That the Hon. Mr. Ferguson do consult Dr. Willey and then approach His Excellency the Governor with the request that provision may be made for the services of Mr. Brown.

GENERAL MEETING.

Colombo Museum, May 30, 1907.

[The Proceedings of this Meeting, and the Paper which was read at it ("The Discovery of Ceylon by the Portuguese in 1506"), with the Discussion which followed, will be issued as Number 59, Vol. XIX., 1907, of the Journal.]

COUNCIL MEETING.

Colombo Museum, August 27, 1907.

Present :

The Hon. Mr. J. Ferguson, C.M.G., President, in the Chair.

The Hon. Mr. J. P. Lewis, M.A., C.C.S., Vice-President.

Mr. R. G. Anthonisz.
Mr. S. de Silva, Gate Mudaliyar.
Mr. C. Drieberg, B.A., F.H.A.S.
Hon. Mr. S. C. Obeyesekere.

Mr. G. A. Joseph, Honorary Secretary.

Business.

1. Read and confirmed Minutes of Council Meeting held on 30th May last.

2. The Council was informed that a sum of Rs. 3,000 had been promised by Government, and would be included in the Supply ill, under the heading "Colombo Museum, for Veddá Research." Action had been taken by the President and Dr. Willey to secure a capable man for the work.

3. The Honorary Secretary notified that the following had been elected Members of the Society :—

(1) J. D. S. Rajepakse, J.P., Mudaliyar : recommended by	(*a*) G. A. Joseph. (*b*) J. Parsons.
(2) D. H. O. K. Jayawardana, Mudaliyar : recommended by	(*a*) G. A. Joseph. (*b*) J. Parsons.
(3) O. W. Henman, Irrigation Engineer : recommended by	(*a*) J. Still. (*b*) G. A. Joseph.
(4) T. Southwell, F.A.C.S., Scientist : recommended by	(*a*) G. A. Joseph. (*b*) J. Parsons.
(5) T. A. J. Noorbhai, Merchant : recommended by	(*a*) G. A. Joseph. (*b*) J. Parsons.
(6) C. J. A. Marshall, J.P., Proctor, S. C. : recommended by	(*a*) J. Parsons. (*b*) G. A. Joseph.
(7) J. A. Daniel, Assistant Mineral Surveyor : recommended by	(*a*) G. A. Joseph. (*b*) J. Parsons.
(8) L. B. Fernando, Proctor, S. C. : recommended by	(*a*) C. M. Fernando. (*b*) G. A. Joseph.

(9) M. F. Khan, Merchant: recommended by	(a) P. de Abrew. (b) P. D. Khan.
(10) W. F. Skene: recommended by	(a) J. Still. (b) G. A. Joseph.
(11) T. B. Madawala, President, V. T.: recommended by	(a) F. Modder. (b) G. A. Joseph.
(12) J. W. A. Ilangakoon, B.A., L.L.B., Advocate: recommended by	(a) J. A. Daniel. (b) G. A. Joseph.
(13) E. C. de Fonseka, Proctor: recommended by	(a) C. M. Fernando. (b) E. W. Perera.
(14) Francis de Zoysa, Advocate: recommended by	(a) C. M. Fernando. (b) E. W. Perera.
(15) G. S. Schneider, Advocate: recommended by	(a) C. M. Fernando. (b) E. W. Perera.
(16) F. A. Hayley, Advocate: recommended by	(a) C. M. Fernando (b) E. W. Perera.
(17) L. A. Mendis: recommended by	(a) J. Ferguson. (b) G. A. Joseph.
(18) D. R. A. P. Siriwardana, Advocate: recommended by	(a) C. M. Fernando. (b) E. W. Perera.
(19) H. J. M. Wickramaratna, Proctor: recommended by	(a) G. A. Joseph. (b) C. M. Fernando.
(20) F. E. Vaid, Secretary, Oriental Government Security Life Assurance Co. Ltd.: recommended by	(a) G. A. Joseph. (b) A. Willey.

4. Resolved that the following candidates be elected Members :—

(1) Miss M. Rollo: recommended by	(a) J. Still. (b) D. F. Noyes.
(2) Dr. W. P. Rodrigo, M.R.C.S., L.R.C.P., D.P.H., &c.: recommended by	(a) G. A. Joseph. (b) C. M. Fernando.
(3) O. M. Obeyesekera, Medical Practitioner: recommended by	(a) A. M. Gunasekera. (b) W. F. Gunawardhana.

5. Laid on the table Mr. P. E. Pieris's Paper on Portuguese Ceilão, &c., revised by him at the suggestion of the Council.

Resolved,—That the Paper be now accepted, read at a Meeting, and published in the Society's Journal.

6. Laid on the table a Paper entitled "Letters from Rája Siṇha II. to the Dutch," by Mr. Donald Ferguson.

Resolved,—That the Paper be referred to the Hon. Mr. J. P. Lewis and Mr. R. G. Anthonisz for their opinions.

7. Laid on the table a Paper entitled "The Dutch Embassy to Kandy in 1731–1732," &c., by Mr. P. E. Pieris, C.C.S.

Resolved,—That the Paper be referred to the Hon. Mr. J. P. Lewis and Messrs. H. C. P. Bell for their opinions.

8. It was decided to invite His Excellency the Governor Sir Henry McCallum to become Patron of the Society, and to ask Sir Joseph Hutchinson, Chief Justice, and the Hon. Mr. Hugh Clifford, Colonial Secretary, to join the Society and become Vice-Patrons.

9. Resolved,—That a General Meeting be held shortly, and followed by another Meeting in October, when His Excellency the Governor as Patron would be asked to preside, and the Paper by Mr. Donald Ferguson on "Joan Gideon Loten, F.R.S., the Naturalist Governor of Ceylon (1752–57), and Ceylonese Artist de Bevere" would be read.

GENERAL MEETING.

Colombo Museum, September 30, 1907.

Present:

The Hon. Mr. John Ferguson, C.M.G., President, in the Chair.

Mr. C. M. Fernando, M.A., LL.M.
Mr. J. Hornell.
Mr. R. John.
Dr. A. Nell, M.R.C.S.
Mr. M. Supramaniyan.
Mr. A. H. Thomas.

Mr. G. A. Joseph, Honorary Secretary.

Visitors: One lady and six gentlemen.

Business.

1. Read and confirmed Minutes of last General Meeting held on May 30, 1907.

2. Laid on the table a list of thirty new Members elected since the last General Meeting.

3. The Chairman said that before entering on the business before the Meeting he might mention that it was now certain that a scientific authority was coming out and would be here by December next to investigate the sociology and everything connected with the Vęddás. He was also glad to learn that there would be

a moderate vote in the next Supply Bill in aid of the expenses incurred. The name of the gentleman was Dr. C. G. Seligmann. Dr. Haddon, in a letter to him, said : " I think there is now not the slightest doubt that Dr. C. G. Seligmann will be available this winter. As I said before, he is thoroughly competent, having been trained by Dr. Rivers and myself, and he has been twice to New Guinea and once to Sarawak. Fortunately, though the Drs. Sarasin have done a good deal, physical, &c., and recently archæologically, there is still much to be done, especially in sociology, religion, magic, psychology, &c., and all this Dr. Seligmann can do extremely well." They as a Society would do all they could to welcome Dr. Seligmann in Ceylon.

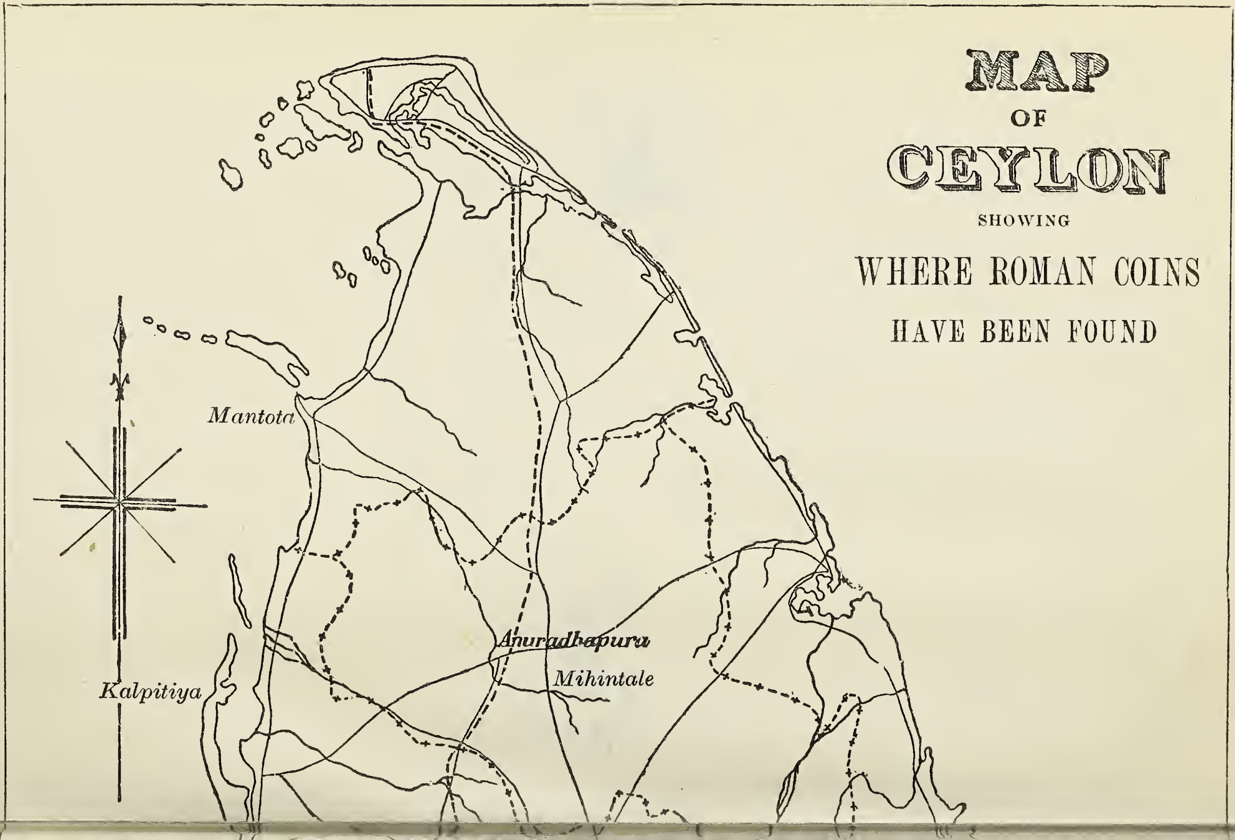
Then they were interested to note that their Vice-President, Mr. J. P. Lewis, was continuing his papers in the " Architectural Review." In its August number appeared the concluding part of his paper on Dutch Architecture, certain illustrations from which were placed on the table for inspection.

Further, he had received from Mr. John Pole of Maskeliya an interesting brief Paper, which he had sent at his request, with a collection of stone flakes and other remains connected with the Vẹddás. All this collection had been made by him after the Drs. Sarasin had left, as Mr. Pole had presented to them his previous collections. They felt it would not be fair to Mr. Pole to bring up his Paper that evening as no announcement had been made, and friends specially interested in the Stone Age would like to be present. At the next Meeting they would have, too, a Paper by Mr. Donald Ferguson on the Dutch naturalist Governor, which with Mr. Pole's paper might go well together.

The Chairman then invited Mr. C. M. Fernando to read Mr. J. Still's papers. Mr. Fernando, who had himself made a study of numismatics, had brought to the Meeting his own collection of old coins.

4. Mr. C. M. FERNANDO read the following Papers :—

BRITISH MUSEUM NATURAL HISTORY
BRITISH MUSEUM NATURAL HISTORY


MAP
OF
CEYLON
SHOWING
WHERE ROMAN COINS
HAVE BEEN FOUND
Mantota
Kalpitiya
Anuradhapura
Mihintale

Sigiriya
Batticaloa
Kurunegala
KANDY
COLOMBO
Badulla
Balapitiya
Hikkaduwa
Bouregoda
Tissamaharama
Gintota
GALLE
Naimana
Matara

BRITISH MUSEUM
NATURAL HISTORY

ROMAN COINS FOUND IN CEYLON.

By John Still.

All information I have been able to gather is embodied in this Paper. At the same time no claim is made to have exhausted the subject. Doubtless some references have been overlooked, and probably many coins remain unidentified in the hands of collectors. It is to be hoped that these gaps in the record will be filled in by those who, possessing information, read this Paper and notice omissions.

I have much pleasure in gratefully acknowledging help from the following gentlemen, without whose courtesy this list would have been far shorter than it is:—Messrs. H. C. P. Bell, A. E. Buültjens, H. W. Codrington, C. M. Fernando, J. P. Lewis, P. E. Pieris, C. D. Vigors, R. Wickremesinghe, and the Colombo Museum authorities. Most particularly Mr. Bell has opened to me many sources of information.

This Paper has for convenience been divided into three portions, viz. :—

I.—General Remarks and Conclusions.

II.—Description of the Finds.

III.—Detailed List of the Coins.

I.—General Remarks and Conclusions.

The Roman coins found in Ceylon, although of but little value and numbering few that are rare in Europe, occupy a position of peculiar interest in the numismatic history of the Island.

To show clearly how important they are, it is necessary, for the benefit of those who have not made a special study of Ceylon numismatics, to very shortly describe the large variety

of coins that make Ceylon so interesting a field for the collector. These may be roughly divided into three classes:—

(i.) Native, unmarked by letters or by any form of device by which the date can be at all accurately ascertained.

(ii.) Native, bearing the name of the king who struck them.

(iii.) Foreign.

(i.) includes eldlings or punch-marked coins, which are the earliest form of coins known in India and Ceylon, and which continued in use for a very long period of time.

Up to what date these eldlings remained in circulation is at present uncertain ; but information recently available indicates a considerably later period than had been believed likely. Possibly they may have survived even until the 11th or 12th century A.D. Besides the eldlings, there are various copper coins which circulated in very early times, but which cannot be definitely ascribed to any particular king or even dynasty.

Larins too, though of a much later period than these others, must also be included in this class (i.), for they bear no inscriptions which fix their date, and although of foreign type were undoubtedly in many cases struck locally.

(ii.) includes a small class of coins, found in gold, silver, and bronze, which were struck by the kings of Ceylon in the Polonnaruwan period (12th and 13th centuries A.D.). They are all similar in type, and each bears the name of a king or queen.

(iii.) is by far the largest class, and includes coins of various Indian dynasties, of the Chinese, Portuguese, Dutch, Venetians, English, &c. But of all these, the earliest that bears writing is the Raja Raja copper coin of the 11th century A.D., save only the Roman coins which form the subject of this Paper, and which were struck in the 3rd, 4th, and 5th centuries A.D., chiefly in the 4th.

So from the beginning of Sinhalese history up to the 11th century A.D. the only coins found in the Island which can be accurately dated are the Roman issues. When it is added they have been found in considerable quantities and in a variety of places widely apart, their archæological value will be evident.

At the beginning of this Paper is given a map marking all places at which I have been able to obtain any record of Roman coins. It is noticeable that nearly all harbours and mouths of rivers on the west coast are marked, showing undoubtedly the importance of the trade with India. It is curious that Jaffna and Trincomalee should remain unrepresented. Another marked exception is Polonnaruwa, which is thus shown to have been of comparatively modern foundation, or the extensive excavations would surely have produced one specimen.

Further on a list of Roman coins found in Ceylon (so far as I have been able to obtain information) is given. But before proceeding to consider them in detail, it will be interesting to compare our finds with those made in the far greater field of India. Fortunately this is rendered easy by Mr. Robert Sewell's most interesting Paper, "Roman Coins found in India,"* in which all available information has been tabulated. Mr. Sewell divides the coins into five periods :—

(*a*) Time of the Consulate.
(*b*) Augustus to 68 A.D.
(*c*) 68 A.D. to 217 A.D.
(*d*) 217 A.D. to 364 A.D.
(*e*) 364 A.D. to the end of the Empire.

Of period (*a*), Mr. Sewell notes 15 specimens; of period (*b*), some thousands, "the product of 55 separate discoveries"; of period (*c*), only a few score; of period (*d*), about a dozen; of period (*e*), large numbers, mostly in the south.

The Ceylon specimens belong to (*d*) and (*e*), with only some half dozen exceptions.

Mr. Sewell goes fully into the reasons for this fluctuation in trade; and as the same reasoning will in large degree apply to Ceylon, I quote a paragraph explanatory of the revival of trade in the fifth and last period :—

"The Eastern Empire at Constantinople, first occupied as a seat of Government by Constantine the Great in 330 A.D., and established as the capital of an Empire in 376 A.D., lasted much longer and enjoyed far greater success. Almost in

---

* Journal, Royal Asiatic Society, October, 1904.

contact with Asia, and its upper classes having leisure as well as wealth, it was natural for the Asiatic trade to improve."

It may appear curious that the only remaining indication of Roman trade should consist of small comparatively valueless copper coins, and of a *very* small number of those of more precious metal. But apart from the possibility that the bulk of the trade may have been carried on by means of barter, owing possibly to the unaccustomedness of the Sinhalese to see coined money in large quantities, it does not seem to me, on consideration, to be unlikely that the gold and silver currency has practically completely disappeared.

When the great rarity of *genuine** specimens of the Sinhalese gold and silver currency of the 12th and 13th centuries A.D. is remembered, it is not difficult to conceive that their more remote Roman predecessors may have been nearly all melted down, especially when it is borne in mind that the centuries which separate the issues one from another, *i.e.*, the 6th to 11th, were among the most stormy and troubled in the history of Ceylon—a time when the language and the written characters were changing, when the country was continually in a state of civil war and was frequently over-run by invaders, and when no man's life or property was safe or secure. This period was the Sinhalese dark ages.

Is it therefore to be wondered at if money, no longer current,† was as rapidly as possible converted into ornaments which might be worn upon the person, or melted down and dedicated to the propitiation of the gods who so stonily hid their faces from troubled Lanka ?

Another point to be considered with regard to these small copper coins is that raised by Captain Tufnell in his "Hints to Coin Collectors in Southern India." Captain Tufnell describes coins found in the Madura District, which are very similar to

---

* How rare genuine specimens are I am inclined to think very few people thoroughly realize. Gold "Lankesvaras" and "Vijaya Bahus" are turned out wholesale in Kandy now, and are so skilfully done that most of them are duly absorbed into collections. The improved manufacture of late is marked.

† This would not apply to the silver eldlings so strongly, as I believe they were *current* through this whole period.

those found in Ceylon, and which, for several reasons, he decides, were minted in India to meet local requirements.

After examining over two thousand copper Roman coins found in Ceylon, I am convinced that our coins are true Roman, and not coined either in Ceylon or India, with the exception of the Naimana find and of a very few other specimens. I give a few extracts from Captain Tufnell's book, and at the same time attempt to show clearly where the Ceylon finds differ. But throughout this comparison it must be understood that the Naimana find is excepted, and will be dealt with separately.

Of course I do not for a moment presume to criticise Capt. Tufnell's conclusions regarding the coins he found in India ; in fact, when describing the Naimana find, I hope to strengthen them ; but I wish to show that the great majority of the Ceylon specimens, although in some respects similar, yet differ fundamentally from those described in "Hints to Coin Collectors" :—

Capt. Tufnell's Coins.	*Ceylon-found Coins.*
(*a*) "For the following reasons I incline to the opinion that they were struck on the spot, and were not importations from Rome. In the first place, during a recent visit to Madura and the surrounding villages in quest of specimens, I came across no less than seven of these coins, Roman beyond any doubt, but of a type which appears to me to be totally distinct from that found in Europe."	(*a*) Among many hundreds of specimens examined, I have found that 99 per cent. of coins that are sufficiently legible to be made out clearly either on obverse or reverse are of one or other of the types described in standard books on Roman coins.
(*β*) "Moreover, they are not the kind of money that one would expect the rich Roman merchant to bring."	(*β*) As I have already attempted to show, it is by no means impossible that a large number of gold and silver coins may have been current and have afterwards disappeared.
(*γ*) "That they are found almost exclusively in one locality."	(*γ*) A glance at my map will show that Roman coins have been found over half Ceylon.

(δ) "On the obverse of all that I have met with appears an Emperor's head, but so worn that with one or two exceptions the features are well-nigh obliterated. In one or two specimens a faint trace of an inscription appears running round the obverse, but hitherto I have not come across a single specimen in which more than one or two letters are distinguishable."

(δ) My detailed list of coins at the end of this Paper shows more than sixty varieties identified and described. Especially noticeable is the identification in their *exerga* of the mint abbreviations of Carthage, Treveris, Antioch, Narbonensis, Constantinople, Rome, and other cities which had the privilege of striking coins.

These extracts are, I think, sufficient to show that our coins are not of the same class as those found by Captain Tufnell.

Now to deal with the exceptions, which seem to be similar to what Capt. Tufnell describes. At Naimana, near Matara, in the Southern Province, a find was made of some 350 coins, hitherto supposed to be Roman. But I am glad to say they are something a great deal more interesting than another find of 4th century A.D., third brass coins, which would at most only add one or two varieties to those already known in the Island. They are in fact an issue struck in imitation of the Roman coins of the 4th and 5th centuries A.D. Whether they were struck in India or in Ceylon there is not much evidence to show. They may be the same as the coins Capt. Tufnell found near Madura; but, whereas his specimens were all quite illegible, many of these are well enough preserved to admit of detailed description. But before describing them I must explain the sources of my information :—

(i.) The Colombo Museum possesses seventeen of these Naimana coins.

(ii.) Mr. Buültjens sent for my inspection ten specimens. Unfortunately the rest of his collection was carried off by burglars.

(iii.) Mr. H. C. P. Bell possesses eighty-eight coins of precisely the same type as the foregoing, which he bought in the Pettah of Colombo.

(iv.) Two coins of this type were dug up at Anuradhapura during the excavation of the monastery known as Toluvila.

In size and in general appearance the imitation and the real Roman money tally pretty well; but a closer examination of the workmanship and design at once makes evident the deception. Of the ninety-four specimens which are sufficiently well preserved to be determined, no less than twenty-six bear heads facing left, the remaining sixty-eight face right. This is 27½ per cent. of heads to *left*, whereas the ordinary Roman coins with hardly an exception face *right*. This discrepancy is explainable by the fact that, although the Sinhalese coiners were used to making dies for coining money, yet their own designs presented few, if any, designs that would suffer from reversal, whereas in the picture of a head it is very noticeable.

Most of the faces are distinguished by rather full lips, characteristic more of the Asiatic than of the European type of feature; and the noses are not Roman but straight, owing, I think, to lack of skill on the part of the artist. The diadem has been retained; but in several specimens the two ends of the fillet, which show in the Roman coins behind the head, have been exaggerated and multiplied into something resembling locks of hair. But, though of crude execution, these coins retain sufficient resemblance to the Roman coins to render them infinitely better representations of the human form divine than the figures on the later coins of Parakrama Bahu and his successors.

Evidently the craftsmen who manufactured the coins had no knowledge of the Roman writing, for the inscription round the head is replaced by various makeshifts, which serve to fill the coin, and which indeed at a little distance or in worn specimens give quite the effect of letters. In some specimens the writing is represented by a series of small stars, in others by rows of dots or of the figure 1, and in yet another by a serrated line like a piece of string knotted at short intervals. Four or five of the heads bear helmets, and in one or more this has degenerated into a sort of cap, or even a turban.

Now to turn to the reverses. Sixty of the 117 coins are sufficiently clear to enable one to describe them in some detail.

These I have classified as follows :—

(i.) Imitation of the type common to Constantine I. and his successors, representing two soldiers on either side guarding a standard. The varieties of this run through a regular series, beginning with a very fair imitation of the Roman design and ending with a mere diagram of lines which bears no manner of likeness to its original. Round the edge is seen an imitation of an inscription in the same manner as on the obverse. Of this type there are thirty-three specimens.

(ii.) A cross, after the fashion found on the coins of many of the Christian Emperors, save that a plain circle is substituted for the surrounding wreath. Of this type there are five.

(iii.) A standing figure, which I take to be a pseudo-Victory. Of this type there is only one.

(iv.) A design of two, three, or four concentric circles. Of this type there are six.

(v.) A design after the fashion of a wheel. This in its simplest form is four intersecting lines forming an eight-armed cross. The next development was to substitute a small circle with radiating arms, which vary in number up to nearly thirty. In most cases this design is enclosed in a circle, and sometimes is surrounded by an imitation legend.

No exergum or mint mark is visible on any of the coins. Owing to their bad state of preservation, no photograph can adequately represent them ; but it is hoped that the illustration given will be sufficient to indicate the points described.

All of the coins, both Roman and imitation, have been thoroughly well used, and are so worn that even where corrosion has not pitted the surface only a small percentage can be accurately read and identified. But designs are less easily obliterated than are inscriptions, and the majority of the coins can safely be fixed to within a limited period. Beyond that, however accuracy can only be obtained by actually reading

the inscription, for though the heads, when well preserved, can be recognized as portraits, one *head diademed right* is very like another, while in the majority of cases the reverse is of a pattern common to the coins of several Emperors.

Finally, before proceeding in Part II. to detailed description, I give a list of the Emperors and Cæsars whose coins have been found in Ceylon :—

1. Claudius I. or II., 49–54 A.D. or 268–270 A.D.*
2. Nero, 54–68 A.D.
3. Vespasianus, 70–79 A.D.
4. Trajanus, 98–117 A.D.
5. Antoninus, 138–161 A.D.
6. Marcus Aurelius, 161–180 A.D.
7. Geta, 209–212 A.D.
8. Aurelianus, 270–275 A.D.
9. Maximianus II., 292–311 A.D.
10. Maximinus II., 308–313 A.D.
11. Licinius I., 307–324 A.D.
12. Licinius II., 317–323 A.D.
13. Constantinus I., 306–337 A.D.
14. Crispus, 317–326 A.D.
15. Constantinus II., 335–340 A.D.
16. Constans, 337–350 A.D.
17. Constantius II., 337–361 A.D.
18. Constantius Gallus, 351–354 A.D.
19. Julianus II., 358–362 A.D.
20. Helena, 360 A.D.
21. Valens, 364–378 A.D.
22. Gratianus, 375–383 A.D.
23. Valentinianus II., 375–392 A.D.
24. Theodosius I., 379-395 A.D
25. Victor, 383–388 A.D.
26. Arcadius, 395–408 A.D.
27. Honorius, 394–423 A.D.

II.—Description of the Finds.

Mantota.

I am indebted to Mr. P. E. Pieris for this passage from De Couto :—

"For in the year of our Lord 1574 or 1575, when Joao de Mello de Sampaio was Captain of Manar, while some buildings on the opposite shore, called the district of Matota—where to-day great ruins of Roman masonry may still be seen—were being pulled down, the workmen who were digging up a rock

* This is a most doubtful identification. See under Mannar.

came upon a portion of the foundation. This was removed. .... There were also found two copper coins, one entirely worn out and a gold coin worn out on one side, while on the other was shown a man's head from the shoulders upwards. Round it could be traced fragments of letters, obliterated in part, but the first stood out quite clearly as a *C*, though the succeeding ones could not be deciphered. The lettering ran quite round, and among them could be traced *R*, *M*, *N*.

" We are of opinion that the letter *C* is the initial of the name *Claudius*, the following letters which were worn out reading *Imperator*, while *R*, *M*, *N* were clearly meant for *Romanorum*."

I am of opinion that De Couto was wrong in ascribing the coin to Claudius on such very slender grounds.

Claudius I. (41–54 A.D.) is styled on his coins " Ti Claudius Cæsar Aug. P. M. Tr. P. Imp." Claudius II. (268–270 A.D.) is styled variously " Imp. Claudius Cæsar Aug.," " Imp. C. M. Avi. Claudius Aug.," and " Diuus Claudius Gothicus." Not one of these would suit.

Some of the coins of Constantinus I. would suit the description. Add to which we have found several of Constantine's brass coins, and none belonging to Claudius.

In the Journal of the Ceylon Branch of the Royal Asiatic Society, vol. I. (3), 73, occurs the following reference to Roman coins :—

" Sir Alexander Johnston states that in the ruins at the same place [Mantota] a great number of Roman coins of different Emperors, particularly of the Antonines, have been found."

In the Journal of the Ceylon Branch of the Royal Asiatic Society, vol. I. (3), 157, in a Paper by the Hon. Mr. Justice Stark, mention is made of " a coin of lead 75 grains in weight, having on one side a Roman head, and on the other an eagle standing on a thunderbolt, as in the Roman Scrupulus." There is no further information given.*

Kalpitiya.

Mr. H. W. Codrington, C.C.S., possesses two small copper Roman coins found at Kalpitiya. He kindly sent them to

* This sounds like a billon coin, and was probably Græco-Roman.

me to examine. Unfortunately they are quite illegible, but they undoubtedly belong to the same period as do the bulk of those described, *i.e.*, between Constantine I. and Honorius.

Hendala.

At Hendala, at the mouth of the Kelani-ganga, was found a Roman coin with the full face head of a young Emperor. The reverse is a winged Victory bearing a long cross. I think the coin belongs to either Arcadius or Theodosius II.

Colombo.

In 1889 a large find of nearly 300 coins was made in Colombo, in or near the Military Cemetery, and was sent to Mr. H. C. P. Bell for identification.

Mr. Bell's identification and notes appeared in the "Ceylon Literary Register" in November, 1891; and from there I have taken over their descriptions and added them to my list. They include the following:—

Crispus, No. 1.
Constantinus II., Nos. 2, 3.
Constans, Nos. 1, 2, 3.
Constantius II., Nos. 1, 2, 3, 4.
Constantius Gallus, No. 1.
Valentinianus II., Nos. 1, 2, 4.
Theodosius I., Nos. 3, 4, 5.
Arcadius, Nos. 3, 6, 7.
Honorius, Nos. 1, 2, 3, 4, 5.

Colombo (Galle Face).

In 1887, while the Galle Face battery was being built by prison labour, several hundred Roman coins were turned up. Little trouble seems to have been taken to collect them, but there are a few specimens in the Colombo Museum, and both Mr. H. C. P. Bell and Mr. C. D. Vigors have kindly allowed me to see specimens they secured. All are of precisely the same period as the majority of the finds, and they include the following:—

Constantius II., No. 1.
Valentinianus II., No. 1.
Theodosius I., No. 6.
Arcadius, No. 7.
Honorius, Nos. 2, 3.

Colombo (Pettah).

Mr. H. C. P. Bell has at different times picked up Roman coins in various shops in the Pettah, Colombo. Of course, being found in the bazaar of a great cosmopolitan city, there is always the possibility of their having been imported in some way or other, but it is best, I think, to include them among the Ceylon finds. The first is a beautifully struck silver coin of Geta, there are several of the ordinary small brass of the 4th century, and finally a most interesting find of exactly the same type as the Naimana coins.

Geta, No. 1 }
Arcadius, No. 3 } Naimana type.

Balapitiya.

In 1896 finds of Roman coins were made on two of the little islets in the Madu-ganga. The larger find was on Perumamarakkala-duwa, and is said to have aggregated about 13 lb. This, taking the average of the coins I have examined, would amount to some 5,800 coins. It was rumoured at the time that there were gold and silver coins in the hoard, but none ever came to light.

Mr. H. C. P. Bell secured some 250 of the coins, and has kindly allowed me to examine them. The majority are very much corroded, but the following are legible:—

Constantinus I., No. 4.	Theodosius I., Nos. 1, 5.
Constans, Nos. 4, 5.	Arcadius, Nos. 3, 6, 7.
Constantius II., Nos. 1, 2.	Honorius, Nos. 1, 3, 4.
Valentinianus II., No. 2.	

The second find was on the island named Gonaduwa. Its numbers I do not know further than that it was described as a "large quantity."

Of Mr. Bell's twenty-two specimens, the only legible one is Arcadius No. 2.

Bouregoda.

This is a small village near Weragoda in the Southern Province. In 1888 some villagers digging a grave came upon

some Roman coins. Mr. Bell secured forty specimens, among which are the following :—

Constantius II., No. 1.	Arcadius, No. 6.
Valentinianus II., No. 5.	Honorius, No. 2.
Theodosius I., No. 1.	

Hikkaduwa.

Mr. R. Wickremesinghe kindly sent for my inspection seventeen Roman coins supposed to have been found at Hikkaduwa. They included :—

Constantius Gallus, No. 1.	Gratianus, No. 1.
Valens, No. 1.	Arcadius, Nos. 5, 6.

Gintota.

Mr. P. E. Pieris, C.C.S., kindly allowed me to examine some Roman coins in his possession. They were found at or in the neighbourhood of Gintota, were half a dozen in number, and included the following :—

Constantius II., No. 1.	Honorius, No. 7.
Arcadius, No. 6.	

Galle.

In April, 1906, I obtained the following Roman coin in a jeweller's shop in the Fort of Galle :—

Theodosius, No. 1.

Note.—Probably the coins from Hikkaduwa, Gintota, and Galle all form part of some find made in that neighbourhood.

Matara.

Mr. J. P. Lewis obtained two Roman coins from the rest-house-keeper at Matara some years ago. One of them, which he kindly let me see (and has since presented to the Colombo Museum), is a large copper coin of Galerius Valerius Maximianus, No. 1 in the list.

Naimana.

In 1887 or 1888 Mr. A. E. Buültjens found about 300 coins in the possession of a villager, who had dug them up. Seventeen of these are in the Colombo Museum, and Mr. Buültjens kindly sent me ten to examine. These are all he now possesses, as the rest were taken by burglars. All of the coins are imitation Roman. I have described them fully above.

Tissamaharama.

In the Colombo Museum there are four small Roman coins found by Mr. Parker at Tissamaharama. They are not legible, but clearly belong to the same period as the bulk of those described.

Batticaloa.

In the Museum Catalogue five coins are mentioned as being found at Batticaloa. Among them are the following :—

Arcadius, No. 2.	Theodosius, No. 6.

Anuradhapura.

In the course of excavations at Anuradhapura Roman coins have frequently been found in small quantities at a number of different places, viz., Toluvila, Abhayagiri, Thuparama, Selachaitiya, the Buddhist rail, Sanghamitta's tomb, &c. Unfortunately nearly all the specimens are too much corroded to be identified, though they are evidently of the same period and type as the rest. One Theodosius, one Arcadius, and two coins of the Naimana type are all that can be identified.

Mihintale.

Some fifty or sixty Roman coins were found at Mihintale some years ago. They are of the same type as the majority of the rest, but are too corroded to admit of identification.

Sigiriya.

This is not one "find," but many. Apart from the several heavy finds of coins made in digging the prison rock terrace and the moated islands, Roman coins have been found singly,

and in small quantities together, all over Sigiriya wherever excavated: summit, terraces, and the city below. Indeed, during that period it almost seems as though they were the current coinage of the short-lived capital of Kasyapa the Parricide. Sigiriya's record in coins is as follows :—

Punch-marked eldlings .. 8	Roman coins, chiefly of the 4th century A.D... 1,675
Sinhalese coins of the Polonnaruwa period (13th century A.D.) ... 4	

Such an enormous preponderance of one type leaves little doubt that it was that in circulation. The latest Roman coin is that of Honorius, who died 423 A.D., only a few years before the reign of Kasyapa.

That the coins were freely used is quite evident from their worn condition, and it is quite noticeable that those of older date are much more worn than those of later date. The following have been identified :—

Licinius II., No. 1.	Valens, No. 2.
Constantinus I., Nos. 1, 2, 3, 4.	Gratianus, Nos. 1, 2.
Constantinus II., No. 1.	Valentinianus II., Nos. 1, 2, 3.
Constans, Nos. 1, 4.	Theodosius I., Nos. 1, 2, 3, 5, 6, 7.
Constantius II., Nos. 1, 3, 4.	Victor, No. 1.
Constantius Gallus, Nos. 1, 2.	Arcadius, Nos. 3, 4, 5, 6, 7.
Julianus II., No. 1.	Honorius, Nos. 1, 2, 3.
Helena, No. 1.	

Kandy.

In January, 1905, in a jeweller's shop in Kandy, while searching through a basin full of hundreds of mixed copper coins, I found 84 small brass Roman coins. The jeweller did not know where they had been discovered further than that he had bought them from a Kandyan villager who had dug them up. The following were identified and sent to the Colombo Museum :—

Constantius II., Nos. 1, 2, 4.	Theodosius I., Nos. 1, 5, 6.
Constans, No. 3.	Arcadius, Nos. 1, 2, 3, 5, 6.
Valentinianus, No. 1.	Honorius, Nos. 1, 2.
Gratianus, No. 1.	

Mr. H. W. Codrington afterwards obtained one in Kandy, probably in the same shop. It was Honorius, No. 6.

Kurunegala District.

Somewhere in this district were found six coins of Roman emperors. They are thick coins of *billon*, an alloy of copper and silver. Struck at Alexandria, and bearing Greek inscriptions, these coins are not strictly Roman. They are in fact Roman colonial coins, and may as such find a place in this Paper. They are as below :—

Nero, No. 1.
Vespasian, Nos. 1, 2.
Trajan, Nos. 1, 2.
Marcus Aurelius, No. 1.

Badulla.

A fine copper coin bearing the head of Aurelian was found in the Badulla river. Like the above it is a colonial coin, and bears an inscription in Greek.

In the Museum is a small copper coin of Arcadius, which came from Badulla :—

Aurelian, No. 1.
Arcadius, No. 5.

III.—Detailed List of the Coins.

The object of this list is to serve as a reference for collectors who have not opportunities of seeing either collections of or books on Roman coins. It also serves the purpose of showing at a glance exactly what Roman coins have been found in Ceylon.

In a few instances it is rather doubtful whether a coin belongs to the first or second emperor of the same name; and although care has been taken to avoid mistakes of this kind, no claim is made to have attained absolute accuracy.

The overlapping and apparent confusion of dates is explained by the fact that there were often several rulers who shared between them the Empire and the title of Emperor. For instance, Gratianus I. shared his power with Valentinianus I. and Valens, next with Valens and Valentinianus II., and finally with Valentinianus II. and Theodosius I.

Where not otherwise stated, all the coins in the list are small brass. I believe them all to be what are known as "third brass." But the distinctions between first, second, and third brass are so subtle that in some instances this opinion may be wrong.

The letters G, S, or C against a coin denote respectively gold, silver, or copper, the latter being used in its most comprehensive sense of including all forms of brass and bronze.

The following abbreviations occur on coins described :—

"Ale. P" = *Alexandriæ Percussa*, the mint mark of Alexandria.

"Ant." = *Antiochiæ*, the mint mark of Antioch.
"Ant. A." = *Antiochiæ officina prima.*
"Ant. H." = *Antiochiæ octava officina.*

"B. K. P." = (?).

"Concordia Augg." = *Concordia duorum augustorum*, used when two emperors reigned together.

"Concordia Auggg." = *Concordia trium Augustorum*, indicates that at the time of its use three emperors shared the Empire.

"Cons. A." = *Constantinopolis officina prima.* The mint mark of Constantinople.

"Cons. T." = *Constantinopolis tertia officina.*

"C. S." = (?).

"D. N." = *Dominus noster.*

"D. N. Fl. Cl. Constantius Nob. Cæs." = *Dominus noster Flavius Claudius Constantius nobilissimus Cæsar.*

"D. V. Constantinus P. T. Augg." = *Divus Constantinus Pia Tranquillitas augustorum.* Appears on coins of Constantine the Great struck after his death.

"Fel. Temp. Reparatio" = *Felix temporum reparatio.*

"Fl. Helena Augusta" = *Flavia Helena Augusta.*

"Fl. Jul. Constantius Nob. C." = *Flavius Julius Constantius Nobilissimus Cæsar.*

"Gal. Val. Maximinianus Nob. Cæs." = *Galerius Valerius Maximianus Nobilissimus Cæsar.*

"Imp. C. Gal. Val. Maximinus P. F. Aug." = *Imperator Cæsar Galerius Valerius Maximinus Pius Felix Augustus.*

"Imp. C. Val. Licin. Licinius P. F. Aug." = *Imperator Cæsar Valerius Licinianus Licinius Pius Felix Augustus.*

"Just. Ven. Mem." = *Justæ Venerandæ Memoriæ*, on a posthumous coin of Constantine I.

"Lug." = *Lugdunensis*, the mint mark of Lyon.
"Max. Aug." = *Maximus Augustus.*
"P. F. Aug." = *Pius Felix Augustus.*
"P. Sept. Geta. Cæs. Pont." = *Publius Septimus Geta Cœsar Pontifex.*
"S M. Ant." = *Signata moneta Antiochiœ.* The mint mark of Antioch.
"S. M. Ant. B." = *Signata moneta Antiochiœ officina secunda.*
"S. M. K." = *Signata moneta Carthaginœ.* The mint mark of Carthage.
"S. M. K. A." = *Signata moneta Carthaginœ officina prima.*
"S. M. N." = *Signata moneta Narbonœ* or *Nicomedeiœ.* Mint mark of Narbonensis or Nicomedia.
"S. M. N. A." = *Signata moneta Narbonœ* or *Nicomedeiœ officina prima.*
"S. M. R." = *Signata moneta Romœ.* The mint mark of Rome.
"S. M. R. O." = *Signata moneta Romœ officina.*
"S. M. Tr." "S. M. Ts." = *Signata moneta Treveris.* The mint mark of Treves.
"Vot. V." = *Votis quinquennalibus.*
"Vot. X., Mult. XX." = *Votis decennalibus multis Vicennalibus.*
"Vot. XX., Mult. XXX." = *Votis Vicennalibus Multis tricennalibus.*

No. **Nero** (54–68 A.D.).

1 .. (Alloy) *Obverse :* Laureated head of Nero. Right.
"..ΚΛΑΥΚΑΙΣΣΕΒΓΕΡ[Μ]...."
Reverse : Head of Aggrippina. Right.
"[ΑΓΡΙ] Π Π ΙΝΑΣΕΒΑΣΤΗ...."
In field "L Δ" which indicates 57–58 A.D.
Struck at Alexandria.

Vespasianus (70–79 A.D.).

1 .. (Alloy) *Obverse :* Laureated head of Vespasian. Right.
"[ΑΝΤ]ΟΚΚΑΙΣΣΕ(Β)ΑΟvΕΣ Π ΑΣΙΑΝΟv."
In field "L B" which indicates 69–70 A.D.
Reverse : Figure of the city of Alexandria standing left, with wreath in extended right hand and sceptre in left.
No legend.
Struck at Alexandria.

2 .. *Obverse :* Laureated head of Vespasian. Right.
"[ΑvΤΟ] ΚΚΑΙΣΣΕΒΑΟvΕΣ Π ΑΣΙΑΝ [Οv]."
In field "L B" = 69–70 A.D.

No.

Reverse : Figure of Roma wearing crested helmet, standing left, spear in right hand and shield on left arm.
"PΩMH."
Struck at Alexandria.

Trajanus (98–117 A.D.).

1 .. (Alloy) *Obverse :* Laureated head of Trajan. Right.
"AVTKAITPAI..."
Reverse : Eagle to right.
In field "LΔ," indicating 100–101 A.D.
Struck at Alexandria.

2 .. *Obverse :* Laureated head of Trajan. Right.
"AVTKAITPAIA.."
Reverse : Canopus of Osiris, wearing head dress of horns, disc, uræi, and plumes.
In field 'L Є," indicating 101–102 A.D.
Struck at Alexandria.

Marcus Aurelius (161–180 A.D.).

1 .. (Alloy) *Obverse :* Bearded and laureated head of Marcus Aurelius. Right.
"...AVPHΛIOC.."
Reverse : Helios in his car drawn by four horses.
In field "LZ," indicating 163–164 A.D.

Geta (209–212 A.D.).

1 ... S *Obverse :* Head of Cæsar. Right.
"P. Sept. Geta. Cæs. Pont."
Reverse : Standing figure of Minerva. Right.
"Nobilitas."

Aurelianus (270–275 A.D.).

1 .. C *Obverse :* Bust of Aurelian, laureated head. Right.
"AKΛΔOMAVPHΛIANOCCEB."
Reverse : Eagle, with open wings, wreath in beak. Head right.
"Є TOVC."
In field "S," indicating 274–275 A.D.
Struck at Alexandria.

No.

Maximianus II. (292–311 A.D.)

1 .. *Obverse :* Laureated head of Emperor. Right.
C "Gal. Val. Maximianus. Nob. Cæs."

Reverse : Genius holding in left hand a cornucopia and with right hand pouring a libation.
"Genio Populi Romani."
In exergue "ANT."

Maximinus II. (308–313 A.D.).

1 .. *Obverse :* Laureated head of Emperor. Right.
C "Imp. C. Gal. Val. Maximinus P. F. Aug."

Reverse : Genius with modius on head, on left arm cornucopia, pouring libation.
In field "B. K. P."
"Genio Imperatories."
In exergue "LUG."

Licinius I. (307–324 A.D.).

1 .. *Obverse :* Diademed head of emperor. Right.
C "Imp. C. Val. Licin. Licinius P. F. Aug."

Reverse : Jupiter wearing pallium, holding Victoriola in right hand and spear in left ; before him an eagle bearing a wreath in beak.
In field "C. S."
"Jovi Conservatori."
In exergue "S. M. N."

Licinius II. (317–323 A.D.).

1 .. *Obverse :* Bust of Cæsar, helmeted head. Left.
C Legend illegible.

Reverse : Winged Victory. Legend illegible.

Constantinus I. (306–337 A.D.).

1 .. *Obverse :* Bust of emperor, diademed head. Right.
C "Constantinus Max. Aug."

Reverse : Two soldiers guarding a standard.
"Gloria Exercitus."
In exergue "S. M. N."

No.

2 .. *Obverse :* Bust of emperor, diademed head. Right.
C "Constan [tinus, &c.] (?)."

Reverse : Two Victories bearing wreaths. Legend illegible.

3 .. *Obverse :* Veiled head of emperor. Right.
C "D.V. Constantinus P. T. Augg."

Reverse : Standing figure of Justitia, left, bearing scales in right hand.
"Just. Ven. Mem."
In exergue "S. M. A. N. T."

4 .. *Obverse :* Veiled head of emperor. Right.
C "D. V. Constantinus P. T. Augg."

Reverse : Emperor (?) driving a chariot and four horses. Legend illegible.

Crispus (317–326 A.D.).

1 .. *Obverse :* Bust of emperor, diademed head. Left.
C Legend illegible.

Reverse : Across field "Crispus," "Cæsar."
In exergue "S. M. A. N. T. B."

Constantinus II. (335–340 A.D.).

1. .. *Obverse :* Bust of emperor, diademed head. Right.
C "Constantinus [P. F. Aug.] (?)."

Reverse : Two soldiers guarding a standard. Legend illegible.

2 .. *Obverse :* Bust of emperor, laureated head, looking over left shoulder.
C "Constanti[nus P. F. Aug.]"

Reverse : Two soldiers, armed, guarding two standards on either side.
"Gloria Exercitus."
Exergum illegible.

3 .. *Obverse :* Bust of emperor, helmed and paludated, face looking left. Spear over left shoulder.
C "Consta[ntinus P. F. Aug.] (?)."

Reverse : Winged Victory, left, with spear and shield, within a circle. Legend illegible.
In exergue "S. M. T. S."

4 .. *Obverse :* Emperor's head. Right.
C "Constantinus [P. F. Aug.] (?)."

No.

Reverse : Two soldiers guarding two standards on either side.
" Gloria Exercitus."
Exergum illegible.

Constans (337–350 A.D.).

1 .. *Obverse :* Diademed head of emperor. Right.
C " D. N. Constans. P. F. Aug."
Reverse : Laurel wreath enclosing " VOT. XX. MULT. XXX."
Exergum illegible.

2 .. *Obverse :* Diademed head of emperor. Right.
C " D. N. Constans. P. F. Aug."
Reverse : Winged Victory, left, holding wreath.
" Vir. Aug."
Exergum illegible.

3 .. *Obverse :* Diademed head of emperor. Right.
C " D. N. Constans. P. F. Aug."
Reverse : Two winged Victories bearing wreaths.
Legend illegible.

4 .. *Obverse :* Diademed head of emperor. Right.
C " D. N. Constans. P. F. Aug."
Reverse : Two soldiers guarding a standard.
" Gloria Exercitus."
In exergue " S. M. K. A."

5 .. *Obverse :* Diademed head of emperor. Right.
C " Constans. P. F. Augg."
Reverse : Illegible.

Constantius II. (337–361 A.D.).

1 .. *Obverse :* Diademed head of emperor. Right.
C " D. N. Constantius P. F. Aug."
Reverse : A soldier spearing a prostrate horse and its rider.
" Fel. Temp. Reparatio."
In exergue " ANT " or " S. M. T. R." or " A. L. E. P."

No.

2 .. *Obverse :* Diademed head of emperor. Right.
C "D. N. Constantius P. F. Aug."
Reverse : Within laurel wreath "Vot. XX. Mult. XXX."
Exergum illegible.

3 ... *Obverse :* Diademed head of emperor. Right.
C "D. N. Constantius Aug."
Reverse : Two soldiers guarding a standard.
"Gloria Exercitus."
In exergue "S. M. A. B." (? S. M. T. R.).

4 ... *Obverse :* Diademed head of emperor. Right.
C "D. N. Constantius P. F. Aug."
Reverse : Standing figure, helmed, holding spear in left hand, right arm extended.
"Spes Reipublicæ."
Exergum illegible.

Constantius Gallus (351–354 A.D.).

1 ... *Obverse :* Diademed head of Cæsar. Right.
C "D. N .Fl. Cl. Constantius Nob. Caes."
Reverse : Soldier piercing a fallen horse and rider with a spear.
"Fel. Temp. Reperatio."
Exergum illegible.

2 .. *Obverse :* Bust of Cæsar, diademed head. Right.
C "Fl. Jul. Constantius Nob. C."
Reverse : Two soldiers guarding a standard.
"Gloria Exercitus."
In exergue "S. M. K. A."

Julianus II. (358–362 A.D.).

1 ... *Obverse :* Head of emperor. Right.
C Legend illegible.
On comparing this head with an illustration in "Roman Imperial profiles," there can be no doubt that the coin belongs to Julianus.
Reverse : Standing figure.
Legend illegible.

No.

Helena (360 A.D.).

1 .. *Obverse :* Bust of empress, diademed head. Right.
C "Fl. Helena Augusta."

Reverse : Standing female figure, bearing a branch in her hand.
Legend illegible.

Valens (364–378 A. D.).

1 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Valens. P. F. Aug."

Reverse : Standing figure (of emperor ?).
"Gloria Romanorum."
Exergum illegible.

2 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Valens. P. F. Aug."

Reverse : Winged Victory, left, bearing a wreath.
"Felicitas Reipublicæ."
In exergue "A.N.T." or "A.L.E."

Gratianus (375–383 A.D.).

1 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Gratianus P. F. Aug."

Reverse : Laurel wreath conclosing "VOT. XX. MULT. XXX."
In exergue "S. M. K. A."

2 .. *Obverse :* Similar to the preceding, but larger, both as
C regards the head and the letters.

Reverse : Illegible.

Valentinianus II. (375–392 A.D.).

1 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Valentinianus P. F. Aug."

Reverse : Winged figure of Victory holding a captive by the hair. Monogram of Christ in field.
"Salus Reipublicæ."
In exergue "S. M. R. O." or "S. M. K. A."

2 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Valentinianus P. F. Aug."

Reverse : Laurel (or oak) wreath containing "VOT. X. MULT. XX."
In exergue "S. M. K." or "S. M. R."

No.

3 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Valentinianus P. F. Aug."

Reverse : Winged Victory, left, holding aloft a wreath.
"Salus Reipublicæ."
Exergum illegible.

4 .. *Obverse :* Bust of emperor, diademed head. Right.
"D. N. Valentinianus P. F. Aug."

Reverse : Emperor or soldier walking to right, dragging small captive by the head.
"Gloria Romanorum."
Exergum illegible.

5 .. *Obverse :* Bust of emperor, diademed head. Right.
C "[D. N. V]alentinian[us P. F. Aug.]"

Reverse : Helmed figure seated on a throne with spear in left hand and some object in right.
"Concordia Auggg."
In exergue "A. N. T. H."

Theodosius I. (379–395 A.D.).

1 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Theodosius P. F. Aug."

Reverse : Winged figure of Victory holding a captive by the hair. Monogram of Christ in field.
"Salus Reipublicæ."
In exergue "S. M. T. R." or "C. O. N. S. T."

2 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Theodosius P. F. Aug."

Reverse : Laurel wreath enclosing a cross.
Exergum illegible.

3 .. *Obverse :* Bust of emperor, diademed head. Right.
C Star behind head.
"D. N. Theodosius P. F. Aug."

Reverse : Three standing figures.
"Gloria Romanorum."
In exergue "S. M. K. A."

4 .. *Obverse :* Bust of emperor, diademed head. Right.
C "D. N. Theodosius P. F. Aug."

Reverse : Winged Victory, left, holding wreath.
Legend illegible.

No.

5 ... *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Theodosius P. F. Aug."

Reverse : Laurel wreath enclosing "VOT. X. MULT. XX."
In exergue "S. M. K. A."

6 ... *Obverse* : Bust of emperor, diademed head. Right. Star behind head.
C "D. N. Theodosius P. F. Aug."

Reverse : Two standing figures with spears.
Legend illegible.

7 .. *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Theodosius P. F. Aug."

Reverse : Laurel wreath enclosing "VOT. XV. MULT. XX."
Exergum illegible.

Victor (383–388 A.D.).

1 ... *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Victor P. F. Aug."

Reverse : Open gate with two towers, between which a star.
Legend illegible.

Arcadius (395–408 A.D.).

1 .. *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Arcadius P. F. Aug."

Reverse : Emperor on horseback.
"Gloria Romanorum."
Exergum illegible.

2 .. *Obverse* : Bust of emperor, diademed head. Right.
C A star behind head.
"D. N. Arcadius P. F. Aug."

Reverse : Three armed figures standing.
"Gloria Romanorum."
In exergue "S. M. K. A."

3 .. *Obverse* : Same as the preceding, but with much smaller head.
C

Reverse : Laurel wreath enclosing "VOT. V."
In exergue "S. M. N. A."

No.			
4 ..	*Obverse*	:	Bust of emperor, diademed head. Right.
C			"D. N. Arcadius P. F. Aug."
	Reverse	:	Laurel wreath enclosing "VOT. X. MULT. XX."
5 ..	*Obverse*	:	Bust of emperor, diademed head. Right.
C ..			"D. N. Arcadius P. F. Aug." (Sometimes the final "g" is omitted, and the legend ends "P. F. Au.")
	Reverse	:	Winged figure of Victory holding a captive by the hair. Monogram of Christ in field.
			"Salus Reipublicæ."
			In exergue "S. M. K. A."
6 ..	*Obverse*	:	Bust of emperor, diademed head. Right.
C			"D. N. Arcadius P. F. Aug."
	Reverse	:	Emperor standing, with spear and shield, being crowned by Victory with a wreath.
			"Virtus Exerciti."
			In exergue "A. N. T. H."
7 ..	*Obverse*	:	Bust of emperor, full face, helmed and paludated, spear over right shoulder, and shield on left arm.
C			"D. N. Arcadius P. F. Aug."
	Reverse	:	Concord seated, helmed, spear in right hand. Victoriola on left hand.
			"Concordia Augg."
			In exergue "A. N. T. H."
8 ..	*Obverse*	:	Bust of emperor, diademed head. Right.
C			"D. N. Arcadius P. F. Aug."
	Reverse	:	Standing female figure. Right.
			"Salus Reipublicæ."
			In exergue "C. O. N. S. T."

Honorius (394–423 A.D.).

1 ..	*Obverse*	:	Bust of emperor, diademed head. Right. Star behind head.
C			"D. N. Honorius P. F. Aug."
	Reverse	:	Three figures standing, armed with spears.
			"Gloria Romanorum."
			In exergue "A. N. T. H.," "A. N. T. A.," or "S. M. N. A."

No.

2 ... *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Honorius P. F. Aug."

Reverse : Two figures armed with spears.
"Gloria Romanorum."
In exergue "S. M. K. A."

3 .. *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Honorius P. F. Aug."

Reverse : Emperor standing, armed with spear and shield, being crowned by Victory with a wreath.
"Virtus Exerciti."
In exergue "C. O. N. S. A."

4 .. *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Honorius P. F. Aug."

Reverse : Emperor helmed, standing, facing right, spear in right hand, Victoriola on left.
Legend illegible.

5 .. *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Honorius P. F. Aug."

Reverse : Emperor on horseback.
"Gloria Romanorum."

6 .. *Obverse* : Bust of emperor, diademed head. Right.
C "D. N. Honorius P. F. Aug."

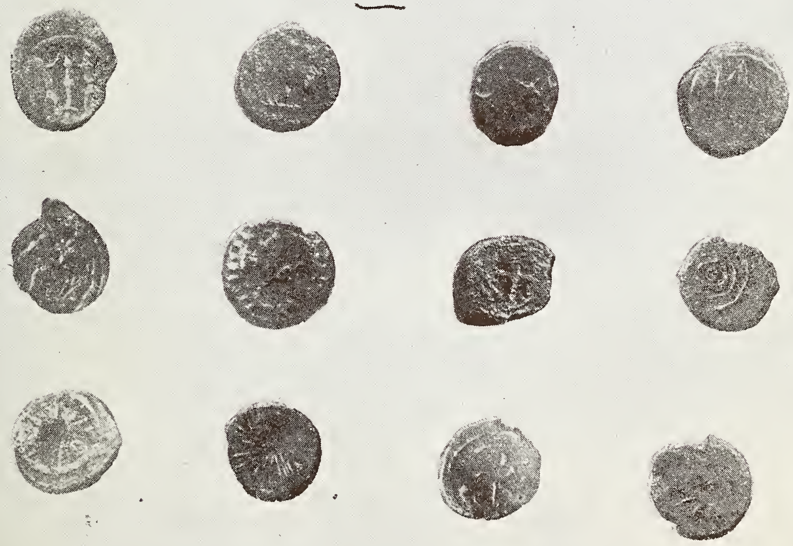
Reverse : Winged figure of Victory left, dragging a captive by the hair. Monogram of Christ in field.
"Salus Reipublicæ."
In exergue "C. O. N. S. T."

7 .. *Obverse* : Bust of emperor, diademed head. Right.
Star behind head.
"D. N. Honorius P. F. Aug."

Reverse : Standing figure of Victory (left) offering some object to (?) emperor.
Legend illegible.

Obverses

Reverses



BRITISH MUSEUM NATURAL HISTORY

APPENDIX.

EVERY coin collector knows what endless toil and trouble, besides straining of the eyes, is incurred in the cleaning of old coins that are caked with green or red patina. A certain amount of this incrustation can be loosened by the use of lime juice, citric acid, &c., but in a large number of cases the only method which seems available is the use of a knife. This is not only a great trouble and a danger to the coin, but often the result is unsatisfactory.

It may therefore be of interest to briefly describe the method adopted by the Archæological Survey Department. The method is the invention of Herr Krefting, and is described in detail in a little book called "The Preservation of Antiquities," published by the Cambridge University Press. The results are most satisfactory. If the inscription or design that was on a coin is completely gone, this method of treatment can do nothing. But if the inscription is still there and only obscured by a hard crust of patina, Krefting's method will bring it out in the most wonderful manner, at the same time rendering all the incrustations so soft and soluble that they can easily be removed by rubbing the coin between the fingers with brickdust and water.

The *modus operandi* is as follows: A thin sheet of zinc must be perforated with a bradawl of about $\frac{1}{8}$ inch diameter at intervals of about 2 inches round the sides and at similar distances across the centre. This is placed flat with the sharp edges of the holes uppermost, and on it are laid the copper coins, each distant from its neighbour about the length of its own diameter, that is to say, on a sheet 6 in. by 6 in. about sixteen coins, each $\frac{3}{4}$ inch in diameter, can be laid, and there will be a similar number of holes. On this is superimposed an exactly similar plate of zinc and another layer of coins. In this way six or eight double layers—zinc and coins—can be laid, so that each sheet rests on the edges of the holes in the sheet below, and on the top is placed a covering sheet with the

edges of the holes downwards. The whole are now placed in a glass or earthenware dish and a weight is put on the top, so that each zinc plate is not only strongly in contact with the edges of the holes in the plate below, but also presses on the coins which lie between. Over the whole is poured a 5 per cent. solution of caustic soda (sodium hydrate 2 oz., water 1 quart), which converts the zinc and copper into a galvanic battery. In twenty-four hours the process is complete (unless the coins are very much incrusted, when a longer time is required), and the coins may be taken out and at once thoroughly rinsed in water. They should then be placed in a dish and hot water poured over them. This washing should be repeated four or five times, and the coins should be allowed to soak for a day, after which they can be cleaned by rubbing with soft sifted brickdust and water, grit being carefully excluded. They should then be thoroughly dried by hot sunlight (tropical) or by placing in the oven for a few minutes.

When in the solution the bottom zinc plate should rest on supports (not on the bottom of the dish), so as to allow the dissolved matter to settle.

Everything which has been in caustic soda should be rinsed before handling.

The solution and zinc cannot be used twice, but are so cheap that this does not matter. Prolonged immersion does not seem to damage coins.

Single coins or small batches can be treated easily by merely wrapping them in zinc tapes and immersing. The zinc should be the thinnest procurable.

NOTES ON A FIND OF ELDLINGS MADE IN ANURADHAPURA.

By John Still.

In August of this year (1906), during the course of excavations in the north end of the archæological reservation known as Vessagiriya, a find was made of seventy eldlings or punch-marked coins. The interest which attaches to this particular find lies, not in the symbols, for all of the coins are bad specimens, but in its position.

One of the greatest puzzles of Ceylon numismatics is the question as to what coinage immediately preceded that which may be called the Polonnaruwan type.

The punch-marked eldlings are known to have existed in remote antiquity. Major-General Sir A. Cunningham surmises that they may possibly have been current even 1,000 years B.C.,* but so far as I can gather they have not been placed later than up to 150 A.D.†

If this date, 150 A.D., which appears to be estimated to be *about* the limit of their circulation in India, is accepted for Ceylon as well, we are left with a great gap of some 1,000 years almost unrepresented by any indigenous currency. Indeed, practically the only coins found in the Island which can be safely placed in that period are Roman or South Indian.

Judging from the number, distribution, and condition of the Roman coins found, it is safe to assume that they were in pretty general use during the 4th and 5th centuries A.D., so that we are at once confronted with this difficulty. Is it likely that a nation who were accustomed to using

---

* "Coins of Ancient India," page 43. † *Loc. cit.*, page 55.

money would remain for many centuries without any? I think it is almost inconceivable that they should do so; yet it remains to be demonstrated that there was a coinage in circulation.

Prof. T. W. Rhys Davids* says that coins were unknown in Ceylon in the 4th century A.D., and ascribes to Parakrama Bahu I. the credit for having introduced the art of coining into Ceylon. But he wrote thirty years ago, and had not a tithe of the information we have now, and he mentions neither eldlings nor Roman coins. Nevertheless, the question regarding the currency has never been settled, and it is the light which it throws on this matter that renders the find under consideration so interesting.

The conclusion I draw from the circumstances of this find is that the punch-marked eldlings were in circulation right up to the time that they were supplanted by the issues of the Polonnaruwan type. In order to give this theory a good chance of acceptance, it will be necessary to enter into considerable detail, and to describe at some length both the coins found and the surroundings of the building in which they were found. I shall take the latter first.

One mile south of Anuradhapura (the present village), in the midst of paddy fields under the Tissa tank, is situated the rock temple Isurumuniya. At the present time the rock itself, the pansala, and a limited compound comprise the whole area generally recognized as Isurumuniya Vihare. But a very short examination of the neighbourhood is sufficient to show that the old boundaries of the vihare were much wider.

Some half a mile from the rocks of Isurumuniya is another much larger group of rocks known as Vessagiriya. It is very easily seen that in this case also the old boundary enclosed very much more land than is included in the present archæological reservation.

When both of these establishments were in their pristine state they were therefore close neighbours, and not separated, as at present, by half a mile of paddy fields.

* "Numismata Orientalia," Ceylon, page 26, section 48.

In the *Mahavansa** it is stated that Kasyapa I. (479-497 A.D.) repaired the Isurumuniya Vihare, making it larger than before, and calling it after the names of his two daughters and after his own name. His own name was Kasyapa, and his daughters were named Uppalavanna and Bodhi.

The inscription slab, which (it is practically certain) came from a position 50 yards south of the building in which the coins were found, bears two inscriptions.† Both of these chronicle grants made to the monastery Bo-Upulvan-Kasub-giri Vehera.

Even without any further evidence there can be hardly any doubt that the site known as Vessagiriya is that occupied by the vihare built by Kasyapa in the 5th century A.D. But further evidence is found in the resemblance of the style of the recently excavated buildings to the style of much of Sigiriya, Kasyapa's fortress capital; in the fact that in a cave immediately opposite the supposed site of the inscription slab, and within 40 yards of the excavated buildings (writing in September, 1906), there is an inscription, not legible, but of that period, as told by the form of the letters; and in the existence in another cave, within twenty yards of the first, of the remains of a painting in which all that is left strongly resembles in character the famous Sigiriya frescoes.

It may thus be taken as proved that the excavations now in progress are bringing to light a 5th century vihare named Bo-Upulvan-Kasub-giri Vehera.

But both of these inscriptions which mention the name are of far later date. One is dated in the 9th and the other in the 10th year of the reign of Mahinda IV., who reigned, according to Wijesinha's computation, from 975 to 991 A.D. So we are certain that this Bo-Upulvan-Kasub-giri Vehera was flourishing up to about 1000 A.D. This has been already stated in *Epigraphia Zeylanica*, but I have added a little information here to that given in that publication, and have stated the case at greater length, because this find of

---

* *Mahavansa*, ch. XXXIX., vv. 10–12; also mentioned in *Epigraphia Zeylanica*, vol. I., page 31.

† *Epigraphia Zeylanica*, vol. I., page 29.

eldlings makes it of importance to leave no doubt as to the identification of the site.

Having now proved that the building in which the coins were found was in a flourishing condition 1000 A.D., it remains to show conclusively that the coins had not lain where they were buried for many years prior to the abandonment of the monastery. Fortunately this is settled beyond all doubt by the fact that the coins were found in a passage, on *brick pavement*, at the foot of steps that must have been used daily. They cannot have possibly lain where they were found for even a day during the occupancy of the monastery. But they may have been—probably were—concealed in the roof in a bag. They were found in a heap all together, showing that they had fallen in a bag, or cloth, or box, or perhaps in the folds of a man's clothes. Even if they were concealed in the roof, that should not long antedate their disappearance from use. And for all we know to the contrary, the vehera may have been undisturbed until a considerably later period than 1000 A.D.

The evidence so far given is sufficient, in my opinion, to make it almost certain that these coins were in circulation up to, or nearly up to, 1000 A.D. But there is yet another way of gaining evidence on this point, and that is by examining the state of the coins themselves.

As already stated, the coins were found in a small heap. They are seventy in number, and consist of sixty-eight silver coins, one silvered copper, and one copper coin. This last I take to be the core of a silvered copper coin, and I have therefore left it out in all the calculations. Of the sixty-nine, thirteen are circular, and the rest square or oblong, with sometimes a corner cut off, probably for the correct adjustment of the weight to the recognized standard. All of the coins are very much worn, so much indeed that of sixty-nine no less than thirty are worn so smooth as to show no sign whatsoever of the original punch marks.

But as the punch marks were not all put on at one time, but mark successive stages in the life of the coin, a better criterion to their age than the dimness of the device will be afforded

by the degree in which they have deteriorated from their original weight. Major-General Sir A. Cunningham* gives the weights of punch-marked coins as follows :—

¼	Karshapana	=	14·4	grains, called	Tankha or Padika.
½	Do.	=	28·8	do.	Kona.
1	Do.	=	57·6	do.	Karshapana, Dharana, or Purana.
10	Do.	=	57·6	do.	Satamana or Pala.

Now, although the existence on one of these coins of a comparatively well-preserved punch mark is no proof that the coin was *not* in circulation for a long time previous to the application of that mark, yet the existence of very much worn marks is proof that the coin *was* in circulation for a very long time after the punch was used.

Major-General Sir A. Cunningham, after trying some 800 coins, came to the conclusion that the average wear of a Karshapana was about 1½ grain per century.† His estimate is based on quite unequalled experience, and must therefore be accepted as correct in so far as such an estimate can be correct.

Taking into consideration the fact that all of these coins are greatly worn, as may be seen by their marks, which are in all cases almost obliterated, I think we may safely say that all those which are in their present condition 25 grains and upwards in weight must have originally been whole Karshapanas weighing 57·6 grains each.

To take a very much worn coin of 25 grains to have been originally 28·8 grains in weight does not allow enough margin for deterioration in weight consequent on wear. Assuming, therefore, that those which are now 25 grains and over in weight are deteriorated Karshapanas, we have fifty-three coins averaging 30·73 grains. Supposing them to have circulated for fifteen centuries—from 500 B.C. to 1000 A.D.—

* "Coins of Ancient India," page 46. † *Loc. cit.*, page 55.

they will have deteriorated at the rate of just over $1\frac{3}{4}$ grain per century. Not very far from Major-General Sir A. Cunningham's estimated rate, which is of necessity only approximate.

Of the remaining coins, those under 25 grains in weight all save one are doubtful. I do not feel at all sure that they, too, were not originally whole Karshapanas, but prefer on the whole to leave them as doubtful. The one concerning which there can be no doubt is one weighing 15 grains. This is so comparatively well preserved that I have little doubt that it is a Kona or half Karshapana. Assuming, as before, that it has seen some 15 centuries of wear, it will have deteriorated in weight at a rate of ·87 grain per century. The criterion of weights therefore gives us quite a reasonable amount of corroborative evidence in favour of the protracted usage of these coins.

At the end of these notes I have given a table showing the weight of each coin, and by quoting the number of designs visible on each side, indicating the condition of preservation.

The only other matter worthy of notice is the question of the symbols shown on these coins. Very nearly all are obliterated, but the best examples are shown in the accompanying plate. None of the symbols are peculiar to Ceylon, and all may be found on reference to W. Theobald's Paper on the subject.*

In the list below, where I have noted a coin as bearing punch marks, it does not necessarily mean that these are even partly legible. In most cases they are not. Where even a small dent attests to the former existence of a mark I have noticed it, as it is the more valuable evidence of age and of wear in proportion to its seeming insignificance. The plate shows typical specimens of the find, which have been chosen for their comparatively well-preserved appearance. The numbers refer to the list below.

---

* "Notes on some of the Symbols found on the Punch-marked Coins of Hindustan," Journal of the Asiatic Society of Bengal, 1890, vol. LIX.

Table of Weights and of Wear.

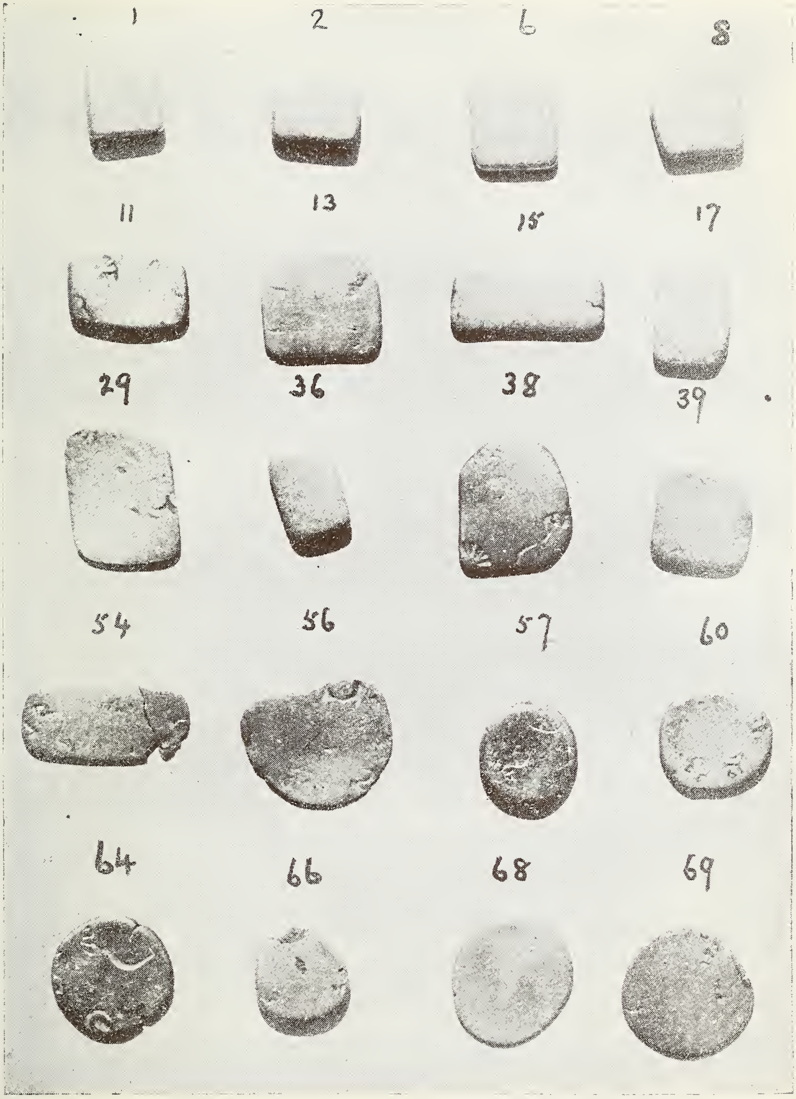
Square and Oblong Coins.

No.		Grains.		Obverse.		Reverse.
1	..	38	..	—	..	—
2	..	35	..	—	..	—
3	..	34	..	—	..	—
4	..	34	..	—	..	—
5	..	34	..	—	..	—
6	..	34	..	—	..	—
7	..	33	..	—	..	—
8	..	33	..	1	..	1
9	..	32	..	—	..	—
10	..	32	..	—	..	—
11	..	31	..	3	..	1
12	..	31	..	—	..	—
13	..	31	..	3	..	—
14	..	31	..	2	..	—
15	..	31	..	—	..	—
16	..	30	..	2	..	—
17	..	30	..	2	..	1
18	..	30	..	1	..	—
19	..	30	..	—	..	—
20	..	30	..	1	..	1
21	..	30	..	3	..	1
22	..	29	..	1	..	—
23	..	29	..	3	..	1
24	..	29	..	1	..	—
25	..	29	..	—	..	—
26	..	29	..	—	..	—
27	..	29	..	—	..	—
28	..	28	..	1	..	—
29	..	28	..	4	..	—
30	..	28	..	1	..	—
31	..	27	..	2	..	1
32	..	27	..	—	..	—
33	..	27	..	—	..	—
34	..	27	..	—	..	—
35	..	26	..	—	..	—
36	..	26	..	—	..	—
37	..	26	..	—	..	—
38	..	26	..	4	..	2
39	..	26	..	3	..	1

No.	Grains.	Obverse.	Reverse.
40	26	2	1
41	26	3	—
42	25	—	—
43	25	—	—
44	24	—	—
45	23	4	—
46	23	—	—
47	23	—	—
48	22	1	1
49	22	4	1
50	21	—	—
51	21	—	—
52	20	1	—
53	20	1	1
54	20	3	1
55	18	1	—
56	15	6	5
	Circular Coins.		
57	43½	4	—
58	38	1	—
59	37	—	—
60	36	3	1
61	35	3	1
62	35	1	—
63	34	3	—
64	33½	4	1
65	33	—	—
66	26	2	1
67	24	—	—
68	23	1	—
69	22	3	—

The numbers in the columns marked "Obverse" and "Reverse" refer to the number of punch marks on the coin. No. 66 is the copper silvered coin. It is broken, and probably weighed several grains more.

Note.—Since writing the above I have noticed, in the Colombo Museum coin cabinet, a Kurumbar coin which supports my idea of the comparatively late survival of the eldlings. In this coin the head of the bull on the obverse has been quite obliterated by punch marks similar to those on eldlings. The *swastika* for one is plainly visible. The Kurumbars flourished broadly from the 6th to the 9th century.



" PUNCH-MARKED " COINS.

BRITISH MUSEUM NATURAL HISTORY

SOME EARLY COPPER COINS OF CEYLON.

By John Still.

Archæological problems may be divided broadly into two classes: Firstly, those which present a great deal of conflicting evidence, often seemingly irrelevant, all of which has to be thoroughly sifted before the rejection of the major part discloses the truth; and secondly, those which at first sight seem to offer no tangible evidence at all.

The study of Ceylon's numismatics constantly brings one up against dead walls of this latter description, where one is confronted by questions of considerable historical interest which seem to be almost impossible to solve.

Perhaps the most important of all these questions is the mystery which prevails regarding the money used by the Sinhalese before the introduction from India of the coinage bearing names. The *Mahavansa* abounds with references to money; but so far as I know there is no existing literature available to the historian or coin collector which throws any light on the nature of this money.

In the hope of to some extent remedying this lack, I have already written on the subject of the silver punch-marked coins or eldlings and on Roman coins found in Ceylon; and it is with the same purpose in mind that these somewhat scanty notes on the early copper money have been put into the form of a Paper.

The materials from which I have drawn my information are the collection of Ceylon coins in the Colombo Museum, the collection in the custody of the Archæological Survey Department of Ceylon,* and Mr. H. C. P. Bell's fine private collection.† Mr. C. D. Vigors, too, has been kind enough to help me.

* Now transferred to the Colombo Museum.

† I desire here to record my indebtedness to Mr. Bell, who not only put his collection and notes at my disposal, but also assisted me much by his great knowledge of the bibliography of the subject, not only in this but also in former Papers on Coins.

There must be coins that would fall within the scope of this Paper in the hands of collectors. Where coins are of little intrinsic beauty or value they are only of interest because they are links ready to be forged into a chain of historic evidence; and it is a pity when this interest is minimized by their being unknown to any but their owners.

Punch-marked Coins.

Small, square, oblong, oval, or round discs of copper, generally bearing no device of any kind, but occasionally showing light traces of punch-marks, are sometimes found. In all cases that have come before me these are merely the copper cores of silvered punch-marked coins. They are found in all stages of peeling, from those in which the copper is only just exposed to those in which all traces of the silver coating have disappeared.

Copper eldlings have been found in India, and in all probability existed in Ceylon; but so far as I know none have been yet discovered in this Island.

These are more properly classed with the silver eldlings, but are mentioned here as they might easily be mistaken, when thoroughly worn, for copper coins pure and simple.

Single-die Coins.

During the excavation of the ruin enclosed by the Buddhist railing, close to Abhayagiri Dagaba in Anuradhapura, eight small, roughly square, copper coins were found in company with a few Roman coins of the fourth or fifth century A.D.

At Selachaitiya Dagaba another coin of the same type was found, also with similar Roman coins, and during the excavation of the northern end of Vessagiri a tenth specimen was unearthed, which possesses enough of its character in common with the others to be included in the same class. For lack of another name I have described these as single-die coins.

All of these coins are more or less deeply concave on one side, and either flat or slightly convex on the other.

The natural inference is that they were struck with a die on one side, the other being left plain. Coins of this style have already been described by General Cunningham in his

"Coins of Ancient India."* Describing the coins of Taxila, he says: "Figs. 6 to 17 are single-die coins, the reverse being quite plain. They present some well-known Buddhist symbols, such as the Chaitiya and the Bodhi tree." Owing to their hopeless state of corrosion, I am unable to make out any of the devices on any of the ten specimens available; and for the same reason it is difficult to imagine what their original weight may have been. With the exception of two, which are broken, they now weigh as below:—

31 grains	30 grains	23 grains	19 grains
30 ,,	26 ,,	22 ,,	17 ,,

the heaviest being the one from Vessagiri, which differs from the rest in being circular.

From their company their date may be roughly estimated to be about 500 A.D., for the Roman coins with which they were found at the Buddhist railing and at Selachaitiya are of the fourth and fifth centuries A.D., and the building in which the Vessagiri specimen was discovered flourished from the fifth to tenth centuries A.D., and perhaps later.

In style a single-die coin is the natural link between punch-marked and double-die coins. But in this case I think it must have been the result of degeneration, for the circular double-die coins, to be described later, were undoubtedly modelled on the punch-marked eldlings, and must have existed prior to 500 A.D. Ten specimens, all at present available, are too few to establish the type as being undoubtedly Sinhalese. They may come from India. We can only hope for finds of better specimens.

Circular Double-die Coins.

In 1884 Mr. H. Parker published in the Journal of the C. B. R. A. S. his interesting paper on archæological discoveries at Tissamaharama. Among other coins found he mentions a roughly circular copper coin bearing Buddhist symbols on either side. This coin was at that time unique; but fifty

* "Coins of Ancient India," by Major-General Sir Alexander Cunningham, page 61.

or more specimens have since been found at Anuradhapura, and others at Mantota; the coins are, however, very rare. Those from Anuradhapura were found E.N.E. of Abhayagiri Dagaba, not far from the Malwatu-oya. Having had opportunities of carefully examining about thirty of these coins, I am able to give a much more accurate description than was possible from Mr. Parker's single not very good specimen. In general appearance the coins are roughly circular, averaging 1·31 inch in diameter and $\frac{1}{10}$ of an inch in thickness. They are fairly uniform in size, but vary a little in weight, twenty examples I weighed averaging 242·75 grains, and varying from 197 grains to 275 grains. They probably represent the *dwipana* or double copper *karshapana*, in which case their correct weight would be 288 grains, and their value $\frac{1}{8}$ of the silver *karshapana* or punch-marked eldlings.*

Although these latter were in use so early as to have been known as "purana," or "old," in the earliest Buddhist literature, they survived in Ceylon at least until the fifth century A.D., and not improbably a great deal later, so that they were almost certainly in circulation together with these large copper coins, which it is natural to suppose represented some integral part of their value.

At first sight it may seem unlikely that coins so diverse in type as punch-marked money and money struck in a double-die were current at one and the same time. But it will be shown further on that these copper coins are modelled from the punch-marked coins, and that their die was in point of fact only a group or arrangement of symbols which already existed, stamped irregularly on the punch-marked coinage. The calling in or suppressing of a coinage would have been very difficult in ancient times, so that even if the eldlings were succeeded by an improved silver coinage, after the pattern of these copper coins, they probably continued in circulation side by side until the older money either became exhausted or was discredited through loss of weight. That some such silver coinage existed is probable, but no specimens have as yet been discovered.

---

* "Coins of Ancient India," page 46.

On all of the double-die coins, with the single exception of the unique ¼ *pana* described later, the design is practically the same, though in a few specimens the symbols on the obverse, which I have denominated *H* and *I*, are transposed, and in two cases *I*, the *trisula*, is reversed, and stands upside down.

On both obverse and reverse the design consists of various symbols so arranged as to fill up nearly the whole space of the field, odd corners being occupied by single, or sets of three, dots, and the whole enclosed in a circle.

The obverse is a design consisting of five symbols arranged thus :—

A.—A *swastika* mounted on a staff or pole, and surrounded by what seems to be a fence.

B.—A triangular symbol.

C.—An elephant walking left, with trunk extended.

D.—A *stupa*, symbol of three cells.

E.—A three-branched bo-tree in an enclosure, with, on either side, a *taurine*, or ball and crescent symbol, below the branch.

The reverse shows four symbols arranged thus :—

F.—A *swastika* exactly the same as *A*.

G.—A similar *stupa* to *D*.

H.—A symbol consisting of two triangles joined apex to apex, with a bar across the joint.

I.—A *trisula*.

So there are in all eight symbols, viz., A and F, *swastika ;* B, triangular symbol ; C, elephant ; D and G, *stupa ;* E, tree ; H, double triangle symbol ; I, *trisula*, and finally the ball and crescent, which forms part of E.

All of these symbols, except the *trisula*, are found on silver punch-marked coins, a strong argument in favour of these

circular coins having been the immediate successors of the punch-marked eldlings.

All of the symbols are Buddhist; that is to say, each symbol can be justly taken as indicative of Buddhism, if its surroundings allow of the probability of such being the case.

This sounds rather unconvincing, but, when analyzed, almost all symbolism goes far back beyond the days of the religion which it commonly typifies. Christianity, for instance, uses many pre-Christian symbols. But as the cross, though pre-Christian, is everywhere recognized as emblematic of that religion, so the tree, the *trisula*, and other symbols, each in itself much older than the time of Gautama Buddha, are to be fairly included among Buddhist symbols.

Doubtless to the king who struck these coins they were emblematic of Buddhism and of little else. But taken separately and examined critically they are sufficiently interesting to excuse a somewhat longer notice of them than is perhaps strictly necessary in a coin Paper. The *swastika* is a universal symbol of good fortune, and is found throughout half the world. Its origin and age are alike unknown.

The *stupa* is meant to represent a dagaba enclosing (in this instance) three relic cells. The tree, although not clearly recognizable as a bo-tree, may be presumed to be one, as it is enclosed within a railing.

The ball and crescent symbols which accompany the bo-tree may represent the sun and moon, or perhaps the full and new phases of the moon; in which case the Buddhist association of this symbol is easily realized, when it is remembered that Buddhist festivals are all at fixed lunar periods.

The elephant, as the vehicle of Indra, who figures so largely in Buddhist mythology, is also Buddhist in this case. Nor must the occurrence of the elephant be thought to be indicative of a decadent period of Buddhism, and thus of comparatively late date, for Buddhism was only a reformation of Brahminism; and, as Rhys Davids has pointed out, Buddha himself lived and died under the conviction that he was an *ultra* sincere Hindu.*

---

* "Buddhism," by T. W. Rhys Davids, page 83.

The *trisula* is of remote eld, and its import is unknown. It has been considered phallic, and it has been thought to be a form of the scarabeus. But as it occurs among the propitious signs on Buddha's footprints, it may be included as an adopted child of Buddhism. An example very similar to the type on these coins occurs on an Amaravati carving of Buddha's footprints and another on the pavement round Thuparama Dagaba.

There remain the triangular and the double triangular symbols; and these are so alike that I fancy their origin and meaning is probably in both cases identical.

Mr. Theobald, in his Paper on punch-marked coins,* figures symbols very like these, and explains them as "food receptacles for birds," conjecturing that they have evolved from a figure of a begging-bowl placed on a post. I must confess this seems a little hard to follow. Of the two symbols, the larger seems to be only a more ornate form of the smaller, which is . On the rock at Vessagiri in Anuradhapura one of the second century B.C. inscriptions ends with a symbol , evidently closely allied to , and perhaps not far removed from , the *crux ansata*, which was the Egyptian hieroglyphic meaning "life to come," and probably in its origin phallic.

But whether food receptacles or no, these symbols are evidently Buddhistic in Ceylon, or they would not occur, as at Vessagiri and elsewhere, in the stone-inscribed dedication of a cell to the "priesthood of the four quarters."

Together with the large coins described above must be included a small coin that was found near Thuparama Dagaba in Anuradhapura. Unfortunately this specimen is (so far as I know) unique, and is much damaged. It weighs in its present state 16 grains; but in addition to being worn it is broken, and in all probability only weighs half or even less than half of its original weight. I am inclined to think that it probably was the $\frac{1}{4}$ *pana* of 36 grains, and thus $\frac{1}{8}$ of the larger coins described above.

---

* "Notes on some of the Symbols found on the punch-marked Coins of Hindustan," by W. Theobald.—Journ. of the Asiatic Society of Bengal, 1890, Part I., No. 3.

On the obverse appears part of an elephant with extended trunk, and above that a triangular symbol. Adopting the same letters as in the larger coins, the obverse, so far as remains, is thus :—

On the reverse the *stupa* and *swastika* symbols occur as on the larger coins, and the double triangle symbol is faintly visible :—

At the end of this Paper an attempt is made to examine the available evidence, and to settle the approximate dates of the various issues described. Absolute and incontrovertible evidence is lacking. But I think the inferences deduced may fairly stand as the most probable estimate until new discoveries either confirm or shake my conclusions.

Coins or Plaques.

What have been already described have, with all their uncertainty of period, &c., at least certainly been money. But the objects now to be described have been the subject of some difference of opinion, the point at issue being "are they money, or are they not?" Having had opportunities of examining some 200 specimens from places widely apart, and having through Mr. Bell's kindness had access to a good deal of correspondence bearing on the subject which he has carefully kept by him for some years, I am able perhaps to throw more light on this question than has been possible hitherto.

Before entering into the question of whether or no they are coins, and if not coins, what they are, I will fully describe them.

They divide primarily into two and secondly into five types or classes, the first and main division being between (A) those in which the device is struck on to more or less malleable metal, and (B) those which are cast and which would break sooner than bend.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

BRITISH MUSEUM
NATURAL HISTORY

(A) Struck plaques divide into three varieties, which will be dealt with separately.

(i.) Roughly oblong pieces of thin sheet copper, which measure about $1\frac{1}{4}'' \times \frac{11}{16}''$. These measurements are only approximate, and no two pieces are exactly alike.

In thickness they vary as much as in size, averaging about ·04 of an inch. In weight they are anything from 20 to 60 grains.

As with their weight, size, and thickness, so with the device, which varies frequently in detail, though never departing far from the common type, which is as follows :—

Obverse.—A standing full-face female figure occupying the whole length of the plaque. This goddess, for such I take her to be, holds in either hand a staff slightly higher than her shoulders and surmounted by some object which may be a trident. On her arms are bangles, and she wears anklets. She also wears conspicuous earrings. Apparently she is draped in a very curt skirt.

Reverse.—A *swastika* exactly like that on the coins described above. In most cases the emblem is thus , but in a few instances . With its staff and rail this *swastika* occupies the whole length of the reverse. On either side of this is a symbol. On one side a bull recumbent, and on the other a vase or pot containing flowers, probably three conventionalized lotus buds. As a rule, the bull occupies the left field and the flower pot the right; but they are often transposed, and not infrequently one or both is reversed and placed upside down.

The manufacture of these plaques is of the most careless description. Evidently sheet copper was sliced into strips of suitable width, which were then chopped up into pieces small enough to fit the die.

No single specimen that I have seen was well struck even on one side, and in no instance is the whole of the device clearly visible. That this is not the result of wear may be clearly seen on examination of the edges, which remain so sharp that almost any specimen would cut the skin if drawn sharply across one's finger. The corners, too, are exceedingly sharp in some instances, and are quite unworn in all.

An examination of the plaques leaves no doubt that they were never circulated and used as money.

In this class (A) (i.) quite 90 per cent. of all the plaques from Mullaittivu, Anuradhapura, Mantota, and Polonnaruwa must be included.

(ii.) The next class are those in which the female figure is replaced by a male figure in a sitting position, with the right leg hanging down and the left tucked up beneath him. In his hand he seems to bear a weapon similar to that held by the goddess, and on his head appears a conical cap. The reverse is in every way simiar to (i.), and in all points, save in the figure, the two classes are similar. Of this type (ii.) there are six specimens, five from Mullaittivu and one from Anuradhapura.

(iii.) A single specimen found within Kiribat Vehera at Anuradhapura has evidently been struck, and must come under (A), but in several ways it differs considerably from (i.) and (ii.). It measures $\frac{13}{16}'' \times \frac{13}{32}''$, and is very thin, weighing only $13\frac{1}{2}$ grains. It has been cut from sheet copper, but is of superior workmanship to any of (i.) or (ii.). The obverse is a very rough representation of a female figure as in the larger plaques. The reverse bears the usual *swastika* ; but the bull and vase are replaced by two curved strokes thus : What these mean I do not know.

(B) *Cast plaques*.—(iv.) The most striking are oblong plaques with outcurving sides—barrel-shaped—which were unearthed near Thuparama in company with the small double-die coin described as being possibly a $\frac{1}{4}$ *pana*.

There are three specimens all too much damaged for the weight to be accurately determined. It may have amounted to 80 grains. On the obverse is a graceful representation of the standing goddess, and on the reverse is the usual *swastika*, with a symbol in the field on either side. That on the left may be a *trisula* ; that on the right I am unable to determine.

(v.) Together with these barrel-shaped plaques and the $\frac{1}{4}$ *pana* was found a single small oblong specimen, which I think is cast. It is much corroded, but appears similar to the general

type, in that it shows a female figure and a *swastika* on the obverse and reverse respectively.

A similar specimen was found in Kiribat Vehera. Before proceeding to weigh the evidence in favour of these plaques having actually been money, I will quote an authoritative definition of what money is.

Mr. W. S. W. Vaux of the British Museum, in a Paper read before the Numismatic Society,* thus defines money :—

"I understand by 'money,' a certain measure of value, whether in metal or not does not matter, though obviously metal and precious metal would be most frequently used as the substance, adjusted to a certain definite and unchanging weight, and consisting of several sizes (so to speak), themselves multiples, sub-multiples, or aliquot parts of some other piece."

This is the theory. In practice coins of primitive manufacture vary somewhat in weight. And of course use and wear carries the variation further, until we get a considerable latitude of weight among coins, which when struck new possibly did not vary 10 per cent. in all. For an instance of this it is only necessary to turn back to the description given of the circular double-die coins, where a maximum variation of 31½ per cent. and a minimum variation of 4½ per cent. from the original *dwipana* of 288 grains may be observed. This is not a larger divergence from the original than is to be expected in the worn condition of these coins.

Twenty plaques of the ordinary type (A i. and ii.) taken at random weigh as follows :—

67 grains	44 grains	37 grains	30 grains
60 ,,	44 ,,	36 ,,	27 ,,
55 ,,	41 ,,	35 ,,	23 ,,
52 ,,	40 ,,	31 ,,	20 ,,
46 ,,	39 ,,	30 ,,	16 ,,

showing a divergence of no less than 76 per cent. between the maximum and minimum. Even were the plaques worn,

* "On the Coins of Ceylon, with some Remarks on the so-called Ring and Fish-hook Money attributed to that Island," by W. S. W. Vaux, M.A. *Numismatic Chronicle*, 1853.

this would be a very large variation. But in no single specimen are there any signs of wear. In every case the edges and corners are clean cut and even sharp, a property which would be most awkward in use, and which would be speedily destroyed by actual wear. From the weights given it will be observed that the great variation is not caused by single very high or very low specimens, but represents an even gradation.

Further, it must be remarked that the plaques are more alike in size than in weight, and that certainly no division into various recognizable sizes can be observed.

So, judged on their suitability for use, these plaques show none of the characteristics of money, and would be more ill-adapted to that purpose than are the South Sea Islanders' strings of perforated shell discs.

But the subject is not exhausted by an analysis of their practical value. Let us consider the arguments of Mr. Parker, the original discoverer, and an ardent advocate of the "money" theory.

At risk of being prolix, I shall quote Mr. Parker's arguments* at some length :—

Mr. Parker.	*The other side.*
They have in some cases been found buried with coins, and were therefore considered coins by the man who buried them.	Various small objects have been found buried with coins. Silver and copper rings, for instance, and small ingots, which may be weights. I cannot see that the association of coins with other objects is any argument in favour of such objects being money. It is even an argument in the other direction ; for where coins of known form existed, it is unlikely that these most inconvenient plaques would have been used as money. One of the Mullaittivu plaques has three beads adhering to it.

* Taken from letters held by Mr. H. C. P. Bell.

Any one who wishes to prove they are not coins must, in the first place, give a satisfactory explanation of the *swasti* monogram on them, which as much belonged to royalty as "God Save the Queen" at the end of a modern Proclamation is an indication of its royal authority. I fancy it would be a difficult matter to produce instances of the ancient use of *swasti* without royal authority.

In a book on the *swastika** so many instances are given that the difficulty is to choose those most striking.

Some of its meanings are the sun, male and female principles, those of the Scandinavians, blessing, long life, good fortune, &c. It is found on the spinning whirls of Troy; in the graves of American Indians, engraved on shell or cut from copper. In England, Ireland, and Scotland it has been used decoratively; it is a favourite ornament with the Chinese and Japanese, and was in the seventh century A.D. the Chinese character meaning the sun. It is marked on the pottery of Babylon, Assyria, Chaldea, Persia, Egypt, Greece, Cyprus, and the Swiss lake dwellings. It was the first of the 65 auspicious signs on Buddha's feet. The Jainas use it, drawing it with the finger in spread rice flour, sugar, salt, or any suitable substance. It is a horse brand in Circassia, and has been found stamped on copper ingots from Ashantee and carved on a pillar in Algeria. At the present day it is drawn by the Bengalee merchant on his door, and is used generally as the symbol of good luck.

In fact it is no more royal than is the four-leaved shamrock.

---

* The "Swastika," by Thomas Wilson, Government Printing Office, Washington, U.S.A.

On one specimen Mr. Parker thought the inscription "Raja Aba" might be distinguished.

Mr. H. C. P. Bell, the greatest authority upon Ceylon's epigraphy, saw the same plaque and was unable even to identify the marks as letters.

Mr. Parker recognized varieties. "There are three distinct classes of plaques: (1) Those from Tissa; (2) those from Mullaittivu; (3) those from Anuradhapura. The Mullaittivu ones are distinguished by the bull, while the Tissa ones differ in workmanship."

Plaques from Mullaittivu, Mantota, Polonnaruwa, and Anuradhapura, which I have examined, all show the bull, and if the Tissa specimens were sufficiently clearly struck, I fancy they would too. But even if the difference does exist, surely it only lessens the probability of the objects being money.

Finally, Mr. Parker connects the sitting figure with the figure on the reverse of the Polonnaruwa type coins.

It may possibly be that both are from a common model. Sedent figures of gods, similar to that on the plaques, have been found in store.

Two of these plaques were submitted by Mr. C. D. Vigors to the British Museum, and were pronounced to be probably votive offerings.*

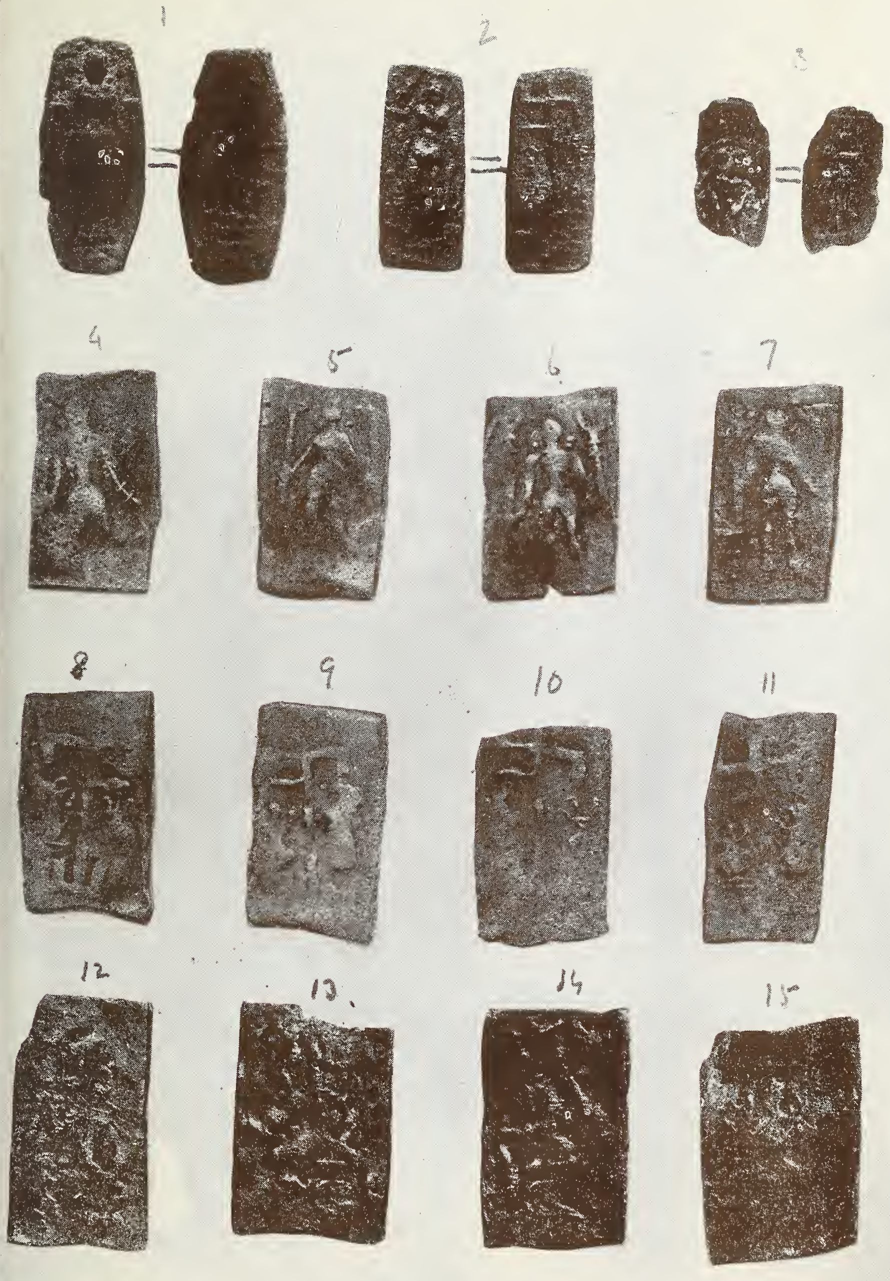
Mr. S. M. Burrows sent four to Dr. Burgess of the Indian Archæological Survey, and received a reply as below :—

"The plaques I have to report are *not* coins, but are much like the Sati and Pitri plaques (in silver) worn in Rajputana by living relatives to secure peace to the spirit of deceased Satis (wives and mothers) and Pitris (fathers). They are in fact a sort of charm. Yours bear the figure of some Buddha goddess, the *swastika*, &c., and are probably not at all *very* old objects."*

This appears to settle the question. As the point appears never to have been discussed in any literature available to the student, perhaps the length of this disquisition may be pardoned.

---

* From letters in Mr. Bell's possession


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

BRITISH MUSEUM NATURAL HISTORY

Summary.

Having discussed all the evidence available, it will be interesting to see how it bears on the original problem as to what was the currency in Ceylon prior to the establishment of the coinage bearing the names of kings, which was introduced in about the twelfth century A.D. or perhaps a little earlier.

Gold we have none.

Silver is represented by the punch-marked eldlings, which probably were in circulation from the invasion in the sixth century B.C. up to the fifth and perhaps even the tenth century A.D. Probably these ceased to be manufactured many centuries before their final disuse.

Copper is represented (i.) by the punch-marked coins, most or all of which are probably the cores of coins originally silver; (ii.) by the single-die coins, of which no specimen even partly legible has yet been recorded, and which may not belong to Ceylon; (iii.) by the circular copper coinage, which was the result of grouping punch-marks in one die; and (iv.) by the coins struck in imitation of the Roman issues of the fourth and fifth centuries, which have been described in my Paper entitled "Roman Coins in Ceylon." These are all the money we know of during a period of fifteen centuries.

As for their dates—

(i.) The punch-marked coins were, as already stated, used from the earliest historical times up to possibly 1000 A.D. They have been found in company with Pallavar and Kurumbar coins of about 700 A.D., and a large number were discovered at Anuradhapura in a fifth century A.D. building. This I have dealt with in a separate Paper called "Notes on some Eldlings."

(ii.) The single-die coins were coeval with the Roman coins, say the fourth and fifth century A.D.

(iii.) The double-die circular coins have never yet been determined, but I think light can be thrown on the subject and an approximate date gained.

Within the dagaba called Kiribat Vehera coins were found during the excavation at various depths. At 28 ft. from the

surface a plaque of type V. was found in company with three Pallavar coins, and near to this a plaque of type I. was discovered.

During excavations near Thuparama Dagaba a plaque of type V. and several of type IV. were found together with the unique circular double-die $\frac{1}{4}$ *pana.*

Near Elala Sohona at Anuradhapura plaques of types I. and II. were found together with Pallavar coins.

This all goes to prove that the Pallavar coins, the plaques, and the circular double-die coins were in existence at one and the same time.

The Pallavar dynasty ended in the seventh century A.D.

How long before and after this period the plaques and circular coins were in use it is hard to say.

Mr. S. M. Burrows found some plaques in the Jetavanarama at Polonnaruwa, which brings them up to about 1200 A.D. That the circular coins lasted so long I think most improbable. For, not being liable as are gold and silver to be melted down for jewellery, we should find them at Polonnaruwa if they were current much after 800 or 900 A.D. Probably they existed from a fairly early date up to somewhere about the end of the Anuradhapura period.

The general result of this Paper is to establish the following points :—

That the coinage of Ceylon in early days was very scanty indeed.

That there was a single-die coinage in the fourth or fifth century A.D., *possibly* struck in Ceylon.

That a double-die money of a most interesting character existed up to somewhere about 700 A.D., and was certainly the immediate successor of the copper punch-marked money, which probably went out long before its type in silver did.

That the oblong plaques were used from the seventh to the twelfth centuries A.D., and very likely both earlier and later.

And that they were not money.

5. The CHAIRMAN said he thought the Papers were of considerable value. Some old opinions were upset, and some were confirmed. Spence Hardy mentioned that in the early laws of Buddhism the difference between coined money and bullion was recognized. He (the speaker) was under the impression that local gold coins had been found in Anuradhapura of an earlier date than the Christian era. Mr. Still, however, said that no Ceylon gold coin was known before the twelfth century. He was sure they had all been interested by the Papers ; and he was only sorry the weather had interfered with the attendance. He hoped that further light would be thrown, by new finds of coins, on the subject—in confirmation or correction.

6. Dr. A. NELL next proposed a vote of thanks to Mr. Still. In England whenever such a discovery was made there were quite a dozen experts to give their opinions. Unfortunately very few coin experts were to be found in Ceylon. They were indebted to Mr. Still for the results of his researches. He was sure they would join heartily in a vote of thanks to him for his Papers.

7. Mr. J. HORNELL seconded. There was more yet to be brought forward regarding the intercourse of Ceylon with the Romans. It was stated that an old King of Madura had for his bodyguard Greek and Roman mercenaries. That was in the second century ; and gave the suggestion how the Roman coins found their way to India and Ceylon, not to speak of trade between Egypt, Southern India, and Ceylon.

8. Mr. C. M. FERNANDO said that, regarding the Roman coins found in Ceylon, Mr. Still seemed to him to attach too much importance to the question of weight. Pliny, in his account of the shipwreck off the coast of Ceylon, said that when the shipwrecked farmer went before the Siṃhalese king what surprised the latter most was that all the coins were of the same weight, which showed that inequality in weight in the Ceylon coins was the common thing. The Romans had a military outpost in South India ; and may be the Naimana coins were a local coinage at that military outpost. Regarding trade between Rome and Ceylon, cinnamon from Ceylon was sold in the streets of Rome 1900 years ago, and was more valuable than rubber in the present day.

9. The vote to Mr. Still proposed by Dr. Nell was carried with acclamation.

10. Mr. R. JOHN proposed a vote of thanks to the Chairman.

Mr. FERNANDO seconded.—Carried.

GENERAL MEETING.

Colombo Museum, November 4, 1907.

Present :

His Excellency Sir Henry McCallum, G.C.M.G.,
Patron, in the Chair.

The Hon. Sir J. T. Hutchinson, Vice-Patron.
The Hon. Mr. Hugh Clifford, C.M.G., Vice-Patron.
The Hon. Mr. J. Ferguson, C.M.G., President.
Mr. P. Freudenberg, J.P., Vice-President.

Mr. R. G. Anthonisz, Government Archivist.
Mr. F. J. de Mel, M.A., LL.B.
Mr. C. M. Fernando, M.A., LL.M.
Mr. D. B. Jayatilaka, B.A.
Sir William Mitchell.
Mr. M. A. C. Mohamad.
Mr. P. E. Morgappah.
Dr. A. Nell, M.R.C.S.
Mr. James Pieris, M.A., LL.M.
Mr. T. Rajepakse, Gate Mudaliyar.
Mr. F. A. Tiseverasingha, Proctor, S.C.
Mr. F. E. Wait.

Mr. J. Harward, M.A., and Mr. G. A. Joseph, Honorary Secretaries.
Visitors : Twelve ladies and seventeen gentlemen.

Business.

1. Read and confirmed Minutes of last General Meeting held on September 30, 1907.

2. HIS EXCELLENCY THE GOVERNOR—after preliminaries—called on Mr. R. G. Anthonisz, Government Archivist, to read the following Paper by Mr. Donald Ferguson on " Joan Gideon Loten, F.R.S., the Naturalist Governor of Ceylon (1752–57), and the Ceylonese Artist de Bevere " :—

JOAN GIDEON LOTEN, F.R.S.,

the Naturalist Governor of Ceylon (1752-57), and the Ceylonese Artist de Bevere.

In a catalogue entitled *Bibliotheca Néerlando-Indica*, issued in 1883 by the well-known bookseller at the Hague, Martinus Nijhoff, occurred the following entry (in French, which I translate) :—

2299. Fauna of the Indian Archipelago and of the Island of Ceylon.—Collection of drawings in colours, representing birds, mammifers, insects, &c., of the Indian Archipelago and Ceylon. 144 folio sheets in two portfolios. f. 300.

These drawings of a really extraordinary beauty from living animals [are ?] by a Sieur de Bevere, who, it would appear, was in the service of Mr. J. G. Loten, who was in the service of the East India Company from 1731 to 1757, successively as Commissary at Bantam,* Governor of Ceylon, &c., and who retired later to Fulham in England. Mr. de Bevere executed his drawings from 1754 to 1781.†

The collection is divided as follows : Birds, 101 sheets ; mammifers, 5 sheets ; insects, 10 sheets ; fishes, &c., 14 sheets ; plants, 14 sheets.‡

Had the Ceylon Government had (as it ought to have) an agent in England on the constant look-out for literary and artistic treasures relating to the Island, the collection described above would now form one of the most valuable exhibits in the Colombo Museum. Now the opportunity is gone, perhaps for ever, for in 1885 the collection was bought by Mr. P. J. van Houten, now President of the Commission of the Colonial Museum at Haarlem, who, at the annual meeting of the council of the Museum in 1905, at which the paintings were exhibited, gave some interesting details regarding their history,

* It was after he had been twenty years in the Netherlands East India Company's service, and had held several important posts, that Loten was sent as Commissioner to the coast of Bantam.

† As Mr. van Houten shows, they were executed between 1754 and 1757.

‡ This division differs from that of Mr. van Houten given below.

his address being printed in the *Indische Mercuur* (Amsterdam) of 6th June 1905. In the issue of the same periodical of 13th March 1906 appeared a communication from Mr. van Houten, in which were given further interesting particulars relating to the drawings and the two persons chiefly concerned in their execution. As the majority of these paintings are of Ceylon fauna, and were drawn in Ceylon by a young Ceylonese under the direction of a Dutch Governor of Ceylon, I thought that my fellow-Ceylonese would be interested in their history. I have therefore translated all that Mr. van Houten has written about them,* and have added in a third section such additional information as I have been able to glean.

Croydon. DONALD FERGUSON.

SECTION I.

This time it falls to my lot to have the honour to draw your attention for some minutes to the subject chosen, which is the collection of plates that for the moment adorns this hall, and, according to the intention of our Director, will remain here on exhibition for a period of four weeks.

For some twenty years I have myself been the lucky owner of these plates, the possession of which I acquired at a book sale of the firm Mart. Nijhoff at the Hague.

"Lucky" owner, I called myself, and I believe that you will consider the word *lucky* rightly chosen when I shall have told you all the facts concerning the plates.

In the first place, they are already fairly old, having been made between the years 1754 and 1757, or just a century and a half ago.

In the second place, they appear, in spite of this, saving for some brown damp-spots on the paper, especially as regards the perfectly fresh colours, as if they had been drawn and coloured only in our present time. And that notwithstanding that they were made in the tropical regions, namely, in Ceylon and Java, in the stirring times of the East India Company,

* All the footnotes to the first two sections are by myself, and Mr. van Houten is in no way responsible for them.—D. F.

where they had to undergo the disadvantages of the often unhygienic and damp dwellings of the Company's servants, and these in addition to the great danger of long voyages by sailing ship.

As the third and, in my opinion, perhaps the most remarkable feature, I may mention that the artist was a man of three-fourths Indian (namely, Ceylonese) blood, who had received very little instruction, certainly none in drawing or painting, and yet in spite of this produced this work, which—as I hope presently further to demonstrate—deserves our admiration in a high degree.

Let me now name the artist to you and tell you the little that I know regarding his person.

He was named de Bevere, and was what we should nowadays call an Indo or "country-born," but was at that time reckoned among the "native Christians," according to the note on one of the plates of his employer, J. G. Loten, who there calls him "the untaught Christian Cingalese,"* to which he adds the following regarding his origin †:—"His father, whom I have known, was a natural son of the major de Bevere (of the most noble and ancient family of de Bevere) by a Cingalese or black Portuguese woman; this son was married at Colombo with a similar brownish woman of whom the artist was a son. In 1755 the father seemed about 50 or 55,‡ the mother 50, the son I guessed was *circa* 22, was on [*sic*—? in] the Surveyor's office somewhat instructed in handling compasses and scales." In a letter written in 1781 Loten also says of him: "a youth born of native Ceylonese parents, living with me and helping me very much in drawing."

From this it appears that de Bevere was unmarried; that he accompanied Loten when the latter was transferred to Batavia in 1757; and also that he did not attain to any considerable age. In one of the notes, made by Loten later in England on the plates, we read of "the late de Bevere." That was about the year 1781.

This is all that I know at present of the artist.

---

* The words quoted are in English.

† The quotation that follows is also in English.

‡ On this, see footnote further on.

Let me now for some moments direct your attention particularly to the artist's work, I mean to the plates themselves. They are all drawn from life or from newly-killed animals.

In number 144 paintings, they depict :—5 mammals, 103 birds, 7 fishes, 3 crustaceans, 3 cephalopod molluscs (so-called "ink-fish"), 10 insects, 13 plants; there being besides on the plates of birds also various plants represented from life.

There are in addition, being in a separate group, ten plates that are not by de Bevere, but were executed by others and mostly in later years, which were in the collection as I bought it.

You see that the pictures of birds form by far the majority. It also seems to me that these are in the main the most beautiful in execution.

Regarding the execution and the value of these plates, now a single word.

Although it cannot be ignored that certain figures are somewhat stiff and, owing to insufficient shading, do not entirely represent the rounding of the bodies, they are otherwise deserving only of praise.

Let us notice, first of all, the complete firmness of the hand that controlled the drawing pencil and brush, whereby everything appears quite distinctly on the paper, and in addition the astonishing precision with which forms and colours are represented. The artist extemporized nothing, but remained true to nature even to the smallest details, were it a bird, a fish, a flower, or anything else that he was delineating. That precision was demonstrated to me still more clearly when last week, assisted by Dr. van Oort, in the National Museum of Natural History at Leiden, for the identification of the birds depicted, I compared the plates with those in standard works of more recent date or the stuffed birds in the collection there. There, where, as is so often the case, various kinds closely allied and much resembling each other exist, the painted ones were always recognizable by little peculiarities of the plumage.

I may by way of explanation refer to two points. Look, for example, in the picture of the Ceylonese Lemur,* at the form of

* The Ceylon Loris or Sloth: see picture in Tennent's *Nat. Hist. of Ceylon* 12. Plate xliv. in Brown's *New Illust. of Zool.* is of the Lemur, but whence it is copied is not stated.

the very small hands and feet and the reciprocally unequal length of the fingers and toes. In the case of the birds, attention should be paid to the so-called beard-hairs which some kinds bear at the root of the beak, the colours so varying of the iris of the eye and of the eye-circles, the size and form of the cutaneous scutellæ or excrescences on the legs and toes; in connection with which I specially draw your attention to the correct representation of the characteristic skin of the foot of the parrots, and, on the other hand, the entirely different one of the ducks, also to the difference in the placing of the toes, in proportion as we have to do with sitters or with climbers; the same with respect to the web of swimmers and paddlers.

And now let us observe once again how de Bevere knew how to handle the colouring brush. Whether it be dark simple tints or fiery and variegated colours, broad surfaces or fine lines, he knows how to represent everything faithfully, be it with bird, insect, or plant. He shrinks from nothing; whether it be that he has to do with the finely marbled plumage of an owl, the handsome feather shades of a gay-coloured barbet, the metallic lustres of other birds' bodies, the eye of a peacock's feather, the body of a fish glistening like mother-of-pearl, a satiny butterfly's wing, a fine plant-leaf with coloured veins, or the delicate transitions of colour in the corolla of a flower.

And then several of the plates considered in their entirety, such as those of the Little-eared Owl,* the Little Barbet,† the Paradise Flycatchers,‡ the pair of little Honeysuckers § on the tree-stem overgrown with orchids, the nest of the Tailor-bird,|| are these not gems of natural life?

I flatter myself to have thus said enough to commend these plates to your special attention and to that of your artistic friends and acquaintances.

---

* The Little Horn Owl referred to below.

† The Red-crowned Barbet of Brown's *New Illust. of Zool.* (see *infra*).

‡ This plate does not appear to have been reproduced in any of the works mentioned later on.

§ I am uncertain if this plate has been copied in any of the works described under Section III.

|| See further on regarding this.

I have however with this not yet said all that is to be told of the plates.

We rightly praise the maker, the skilful artist de Bevere, but should be incomplete and even ungrateful if we did not remember with respect the man who discovered and caused expression to be given to de Bevere's talent, who indeed probably took a practical interest in the preparation of the plates. I also venture to think that your attention will be well bestowed upon some particulars that I can tell you regarding his career and the further history of the plates.

The man who set de Bevere to the work and paid him for it was—I have already a while ago named him several times—Joan Gideon Loten, during the years 1731 to 1757 in the service of the Netherlands East India Company, and steadily climbing up to their most important offices. What I can tell you regarding his personality and his services I owe, first, to his own notes, made upon the back of the plates and in a couple of bundles of papers left by him, which form part of the collection; but second,—having had my attention drawn thereto by that widely-read expert in documents relating to the colonies, Mr. G. P. Rouffaer at the Hague, whom I hereby thankfully mention,—especially to the *Kronijk van het Historisch Genootschap te Utrecht*, 16th year (1860), 4th series, part I., wherein on page 106 and following appears a detailed report from the hand of the late Prof. P. J. Veth on papers left by Loten. Of the papers themselves, which I should so willingly have consulted, in the hope of learning further details of the life of the testator, all trace has, alas, since been lost. At least I have not yet, in spite of investigations made, succeeded in finding them again.

From Prof. Veth's report I borrow the following :—

Joan Gideon Loten left 28th December 1731,* in the rank of under merchant, by the ship *Beekvliet* from Amsterdam. The ship formed part of a squadron of five ships, and put to sea from Texel, 4th January 1732. In the beginning of August they arrived safely at Batavia.

* For information regarding Loten's parentage and birthplace see Mr. van Houten's second paper below.

Animated with much love and sympathy for nature, especially the animal world, Loten made several excursions in the neighbourhood of Batavia, such as to Tandjong-Priok, Tanahbang, the island of Onrust, &c.

He did not, however, remain long in Batavia. On 10th July 1733,—Prof. Veth writes 1732, which, however, cannot be correct,—being already appointed fiscal of Java's north-east coast, and having on 24th August of that year married Anna Henrietta van Beaumont,* he left on 10th September with his wife per ship *'t Huis de Vlotter* for Samarang, where he arrived on 29th September—thus after a 19-days' voyage.

He continued with his business duties to study natural history, and made *inter alia* an excursion inland from 6th to 10th November 1740, and appears to have then taken an interest also in the architectural antiquities of Java.†

Re-appointed to Batavia in 1741, he returned thither per ship *Zorgwijk*, and remained there this time until the beginning of 1744, when, being nominated as Governor of Macassar, he embarked thither with his wife and a little daughter on 2nd March on board the ship *Adrighem*, to arrive at the place mentioned on 24th March. On the "Journael in 't edele Compagnieschip Adrighem van Batavia na Makasser," kept by the skipper Herbert Sam, and read by Prof. Veth, Loten made some notes, and says therein with regard to the said "Capteyn Herbert Sam" that he was "I understand from Dordrecht, of a good family, but a dissolute and not very polished man."

Advanced to Councillor Extraordinary of India,‡ Loten in 1750 § handed over the government of Macassar to his successor, Rosenboom, at the same time leaving him a memoir (printed in the works of the Utrecht Society) comprising a detailed

* Regarding whom see *infra*.

† It was during his residence at Samarang that Loten's three children were born, only one of whom survived (see under Section II.).

‡ In December 1747 (see Hooykaas, *Repertorium op de Koloniale Litteratuur* ii. (1880) 104).

§ On 17th October 1750, according to Robidé van der Aa in the paper cited *infra*.

report of the state of the Government of Macassar and of what the writer as Governor had accomplished.

From the other papers quoted by Prof. Veth in the journal named it appears that in 1752 Loten was nominated as Governor of Ceylon,* and on 30th September of that year arrived at Colombo per ship *Giessenburg*. There he discovered the artistic talent of de Bevere, and got him to prepare the majority of the plates exhibited.

On 11th† August 1755 his wife died in Colombo.

Loten occupied the Governorship until March 1757, when with the rank of "Councillor Ordinary of Netherlands India"‡ he returned to Batavia, entertaining the purpose of shortly leaving the service of the Company and setting out upon the return voyage to the fatherland.

From a paper written at Colombo in February 1756, and addressed to the Political Council, it appears that he experienced great difficulties with one of his head officials, the upper merchant and chief administrator Noël Anthonie le Beck.§ Prof. Veth also remarks that Loten's rule in Ceylon was much disturbed by internal commotions, fear of attack from external enemies, and great scarcity of finances.|| There also existed from his hand a "Geprojecteerd Reglement vervattende d' ordres die men in cas van eenig onverwagt allarm

---

* In succession to Gerard Joan Vreelant, who died in February 1752, after a governorship of under a year. The commandeur of Jaffna, Jacob de Jong, acted as Governor until Loten's arrival (see C. As. Soc. Jl. xi. 141, Wolf ii. 75, 126). Wolf was in Ceylon during the whole of Loten's governorship, but, being in Jaffna, did not come in contact with him, and says nothing of his rule. In the C. As. Soc. Jl. viii. 430–3 (misprinted 336–9) will be found a letter in Sinhalese, with translation, written by Loten from Colombo on 4th July 1754, to the Siamese priest Upāli, who, with other *theras*, had recently arrived in Ceylon in response to an embassy sent to Siam by King Kírti Srí Rájasinha (see C. As. Soc. Jl. xviii. 17–44).

† This should be 10th : see second paper *infra*.

‡ According to Robidé van der Aa (*u. i.*), Loten was raised to this rank in October 1754 (see also Hooykaas, *op. cit.* 102).

§ See R. G. Anthonisz's *Report on Dutch Records* 50.

|| For a summary of the events in Ceylon during Loten's governorship, see the *Beknopte Historie* (C. As. Soc. Jl. xi. 141–5).

zou hebben t' observeeren,"* of which Prof. Veth says that the document is very circumstancial, whilst the conclusion testifies to the calm deliberation of the author; also a "Ruwe Schets der behuizingen binnen 't casteel Colombo met dier bewoonderen in de jaren 1756-1759."†

That his departure from Colombo was accompanied by special ceremonies appears from a document, printed in the journal named, entitled "Project van het Cerimonieel dat g'observeerd zal dienen te worden zo aan de wal als op de schepen, ten dage van het vertrek van den Wel Edelen Groot Achtbaren Heer Joan Gideon Loten, Raad Ordinair van Nederlandsch India en afgaande Ceylon's Gouverneur en Directeur op den 18^n Maart A^o 1757."‡

Loten at that time took de Bevere with him, as appears from the plates prepared by the latter in the course of the year 1757 at Batavia, and the paintings containing birds, *inter alia* pigeons, kingfishers, and woodpeckers, which Loten managed to shoot or catch in the neighbourhood, as well as of Molucca parrots brought to Batavia.

In accordance with his intention Loten returned home in 1758, and indeed as admiral of the return fleet, reaching his native soil in June of that year (*Tijdschr. Hist. Gen.* 1860, pp. 112-113). The voyage was not entirely free from mishaps; during the passage, in a mutiny on board, his goods were plundered, whereby among other things he suffered great

---

* "Proposed Regulation comprising the orders that would have to be observed in case of any unexpected alarm."

† "Rough sketch of the dwelling-houses inside the Colombo castle, with their occupants, in the years 1756-1759 [? 1757]." Possibly a copy of this interesting document exists among the Dutch archives in Colombo.

‡ "Plan of the ceremonial that shall be observed both on shore and on the ships on the day of the departure of the most honourable Mr. Joan Gideon Loten, Councillor Ordinary of Netherlands India, and retiring Governor and Director of Ceylon, on the 18th of March 1757." (See R. G. Anthonisz's *Rep. on Dutch Rec.* 109.) Loten was succeeded by Schröder or Schreuder (who arrived at Colombo on 27th September 1756), a man of very different temperament, under whose rule broke out a war with the Sinhalese that lasted over six years and cost the Dutch an enormous sum in addition to much loss of life (see *Ceylon Lit. Reg.* v. 84).

inconvenience and the loss of memoranda for a claim that he had upon the East India Company.

He had, namely, during his governorship of Ceylon, advanced to the Company's chest the sum of 82,000 rixdollars. A letter of demand for the repayment of this sum, sent in to Governor-General Mossel* in 1757,† had for the time being the only result that he was asked to complete the sum to 100,000 rixdollars! To this he agreed, and got back the additional 18,000 rixdollars later through his attorney in Java. It cost him more trouble and time to get back the large sum of 82,000 rixdollars. From the transcript printed in the journal mentioned, of a demand presented in Europe, it seems that only in 1763, when he "was in France for the improvement of his feeble health," did he receive the money back, but with a gross deduction of $7\frac{9}{13}$ per cent. for the Company and $\frac{1}{4}$ per cent. on the interest, plus $2\frac{1}{2}$ per cent. commission. In the said letter of demand he asks for the deduction back, as well as the interest at 6 per cent. since 1762. This last, however, was not granted to him. From an "extract uyt de Resolutie door de vergadering der Heeren 17en binnen Amsterdam genomen op Woensdag 1 April 1767,"‡ it appears that he received a refusal.

From various notes and papers that accompanied the plates in the portfolios it appears that Loten was in constant correspondence with students of natural history in the colonies and in Europe, and now and then sent specimens to private persons or learned societies in the motherland. He himself on his homeward voyage brought with him *inter alia* four live crested pigeons,§ but had declined an offer made to him by his cousin,|| Mr. Cornelis Hasselaar,¶ at Cheribon, of deer and birds for taking with him on the same voyage.

---

* Jacob Mossel, Governor-General, 1751–61.

† Perhaps the marriage of Loten's relative Hasselaar to Mossel's daughter in this year (see note below) induced him to send in his claim at this time.

‡ "Extract from the resolution adopted by the meeting of the Seventeen in Amsterdam on Wednesday, 1st April 1767."

§ See extract from Edwards's *Gleanings of Nat. Hist.* further on.

|| Or nephew (*neef* means either).

¶ Pieter Cornelis Hasselaar married, at Batavia, 24th April 1757, as his second wife, Geertruida Margaretha, the daughter of Governor-General Mossel. (See notice of him in van der Aa's *Biog. Wdnbk. der Nederl.*)

He was himself not unskilful at painting in colours. This appears from the plate with a representation of a sea animal belonging to the jelly-fishes, the so-called " Bezaantje " (Physalia),* it being apparently his own drawing, done by himself on the outward voyage to India in 1732, or perhaps a copy of his own drawing. Further, I imagine that both the too deep-red coloured representations of the atlas moth made at Macassar, and thus before he knew de Bevere, are also from his own hand, whilst from other notes written by him it seems apparent that he himself drew other plates besides, or at least assisted in them.

An active man like Loten naturally did not remain quite quiet after his departure from the Company's service, although, as we saw just now, he had for some time to wrestle with less good health.

His view of life we are enabled to know from, amongst others, the cover of a packet, " Notes to serve provisionally for bringing into order what I have successively collected, both in painting from life and in writing, in order to be able to contribute some light upon the natural history of East India and especially of Java, Celebes, and Ceylon," dated 25th December 1754, and underneath quoted Ecclesiastes ix. 10.

If we turn up this text of the " Preacher " we find : " Whatsoever thy hand findeth to do, do it with thy might ; for there is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest."

From the papers that he was able to examine, Prof. Veth saw that Loten, among other things, left on 4th November 1775, as I imagine, with a commission,† on board the East India Company's ship *Alkemade*, accompanied by two other ships, for the Cape of Good Hope, where he arrived on 17th February 1776, and on 7th March of the following year set out on the homeward voyage in the ship *Delfshaven*, accompanied by three other ships, and on 13th June anchored at Texel.

---

* The "Portuguese man-of-war," common on the beach at Colombo after storms (see Tennent's *Nat. Hist. of Ceylon* 400).

† This surmise is incorrect : Loten visited the Cape on private business (see second paper).

In later years Loten settled at Fulham near London.* There he remained zealously studying zoology and botany, and had regular intercourse with men of science and scientific institutions in the motherland and England. He wrote various notes on or with the plates, or completed earlier-made notes. For this the English language, of which he was a thorough master, was often used, conceivably on account of the English friends who received the plates for inspection or for use. I say *for use*, because from the accompanying notes it appears that the plates did frequent service† for those in the well-known work of Edwards's *Gleanings of Natural History*,‡ and the sequel to it by Brown, *Illustrations on Zoology*.§

The loan of the plates for the purpose mentioned often however caused old Loten much vexation.|| We in our time also know well that the loan, especially of books, is even yet accompanied by the danger of receiving them back in a less fresh condition, or sometimes not at all. Now it did not happen to Loten quite so badly, but he could also talk of injuries, and his displeasure at the state in which he often received the plates back sometimes drew from him on the back of the plates bitter expressions at the expense of the engraver; for instance,¶ on that representing the nest of the Tailor-bird:** " The dirty scoundrel was not contented with ruining

* This is hardly accurate, as Loten's residence at Fulham seems to have been confined to the period 1759–65 (see under Section III.).

† As regards this statement see Section III.

‡ *Gleanings of Natural History*, &c. (in English and French), by George Edwards, 3 parts, 1758–60–64. This is a continuation of the same author's *A Natural History of Uncommon Birds*, &c., 4 parts, 1743–47–50–51. (See further under Section III.) The British Museum Library possesses copies of both these works, presented by the author to the Rev. Thos. Birch, containing Edwards's original paintings.

§ *New Illustrations of Zoology*, &c. (in English and French), by Peter Brown. 1776. (See further under Section III.)

|| I think that Mr. van Houten here unwittingly exaggerates: Loten's complaints seem to have been confined to the engraver Mazell, whose ill-treatment of the drawings must have taken place in 1768–9 (see further on), and not to have applied to Peter Brown, to whom Loten lent a number of his drawings for copying some five or six years later.

¶ All Loten's annotations that follow are in English.

** Plate viii. in Pennant's *Indian Zoology*.

one of these drawings of the same object but ruined them both ;" and somewhat lower : "By no means is this reflexion on the late Mr. Sidney Parkinson,* who kept everything very clean," and finally in the lower corner as a further explanation (erased later, but still legible) : "This was the ——— bungling engraver Mazell."†

On another plate (also erased, but still legible) : "Made so dirty by the pityable engraver Mazell ;" and on plate 4 (Owl)‡ there follows after a long unbosoming, later made illegible, certainly also directed at the engraver : "What a difference of behaviour between the late worthy Mr. Geo. Edwards and such a scurrilous, scrubby fellow."

That later, however, the wrath of the old man, even though it were just, was calmed, appears not only from the erasures just referred to, but from the words, placed under the erased portion of the plates, "Forgive and forget."

The perusal of Loten's notes offers the reader moreover in many respects a peculiar pleasure, both because one obtains spontaneously a retrospect to the establishment of the East India Company in the tropics, now a century and a half ago, and also as regards the evidence of accurate observation by the writer, and the often valuable details related by him regarding the ideas of the natives touching the depicted animals and plants or their characteristics and value.§

A couple of examples of this :—Of the *Pitta*, called by Loten "the short-tailed Pye" :|| "I once found such a bird at Colombo inside the citadel in the garden behind the government house after I had resided there quite a year or longer ; it leaped to the ground, and let itself be caught with the hand ¶. . . . ."

---

* The talented young artist who accompanied Banks and Cook in their voyage round the world in 1768. He died at sea on 26th December 1771. (See *Dict. of Nat. Biog.*)

† Regarding this man see later on.

‡ The Little Horn Owl, doubtless, forming plate iii. in Pennant's *Ind. Zool.*

§ It is to be hoped that Mr. van Houten will in some future paper publish the whole of Loten's annotations.

|| This name is quoted in English. The bird in question is figured in plate cxiv. of Edwards's *Gleanings* (see under Section III.).

¶ Cf. Legge's *Birds of Ceylon* 691.

Speaking of the depicted Bee-eater (Merops), he states to have learnt from the natives of Macassar that these birds dig holes in front of their nests in the clayey banks of the rivers, which, as one now knows, is quite correct, since the Bee-eaters agree in this with many Kingfishers. Of the variety of *Copsychus* (birds allied to the Thrushes, which are very warlike and courageous) depicted on other plates, it is also related that in Ceylon it regularly follows and chases the crows with loud cry, and is therefore well called "king of crows."*

Some statements evoke from us, so many years after they were set down, an involuntary smile.

Such, for example, on the painting of the dark-coloured Molucca Lori Parrot (Batavia, 1757), that "it whistled entire hymns and the morning song 'uit mijnes Herten gronde' in the sweetest musical manner."†

In connection with the painting of the Indian Golden Thrush at Macassar, describing the lovely "water-like mellow whistle" of this bird, so written because the writer states there that he is reminded by the noise of the well-known old water-whistle, he adds thereto in 1779 that he had heard from Dan. Mackay ‡ that because of its whistle the Gelderland peasants call the Golden Thrush "Hansken van Trurelen."

To the plate representing a pigeon fallen dead on a hot day at Batavia in 1757 § is appended the simple note that he received the bird "from mejuffrouw Verklokken, Caatje Rotgers's daughter, afterwards [the note is apparently written later in Europe] married more than once, now I believe widow of Governor-General Riemsdijk."||

---

* The name quoted is in English. The bird known in Ceylon as the "King crow" is the Drongo (*Buchanga*), which has the habit described by Loten. The Magpie-robin (*Copsychus*), though a pugnacious bird, does not, I think, chase crows (cf. Legge's *Birds of Ceylon* 388 and 435).

† The quotation is in English.

‡ Probably Daniel, son of Æneas Mackay, and founder of the Dutch family of Mackay: he died in 1745 (see van der Aa's *Ned. Biog. Wdnbk.*).

§ This forms plate vii. in Pennant's *Indian Zoology*, where the fact of the bird's having fallen dead from the heat is stated, with some details (from Loten's notes) regarding the effect of the great heat in Java on the animals there.

|| Jeremias van Riemsdijk, Governor-General 28th December 1775 to 3rd October 1777, when he died. Theodora Rotgers was his third wife (see van der Aa's *Biog. Wdnbk.*).

And there are also more valuable remarks!

For a very long time the paintings, or more correctly copies of them, certainly borrowed from the works of Edwards and Brown, continued to do service for illustrated works. As a valuable proof of this may, *inter alia*, serve the little work published in 1861 in this country by our fellow-countryman the late Prof. P. Harting, the *Bouwkunst van Dieren* (reprint of a paper in the periodical *Album der Natuur*), where at page 266 a wood engraving representing the nest of the Tailor-bird is plainly a copy, though it be a rough one, of de Bevere's plate here present.

In the handsome work of Captain Legge, *A History of the Birds of Ceylon*, mention is also made in an introduction of paintings which in his day Loten had had prepared by a "native artist."* I have not been able to ascertain if that refers to duplicates of the plates in my possession or some others, as also if and where these plates still exist. A letter written by me some years ago to Mr. Legge came back as undeliverable, and inquiries made subsequently through the firm of Martinus Nijhoff of the London publisher led to no result.†

---

* Mr. van Houten gives these words in English, but they do not occur in the introduction to Legge's work. After mentioning George Edwards's *Nat. Hist. of Uncommon Birds* (the date of publication of which is given as 1743), but not saying a word about Edwards's later work (which, however, is occasionally referred to in the body of the book, sometimes incorrectly), Legge says:—"During the latter half of the eighteenth century Gideon Loten was nominated Governor of Ceylon by the Dutch [*sic*], and, happening to be a great lover of birds, collected and employed people to procure specimens of species which attracted his notice; and from his labours we first learn something of the *peculiar* birds of the Island. He had drawings prepared of many species, which he lent to an English naturalist [*sic*] named Peter Brown, who published in London, in 1776, a quarto work styled 'Illustrations of Zoology.'..... The artist who delineated these species was Mr. Khuleelooddeen [*sic* !?]. Some of the drawings are fairly accurate; but others are grotesque and unnatural, showing the poor state of perfection to which the illustration of books had up to that time been brought." In view of the fact that Edwards's beautifully illustrated works had preceded Brown's far inferior production, the deduction in the last sentence is absurd; and as to the illustrator of Brown's work, it was Brown himself (see further on). Whence Legge got his "Mr. Khuleelooddeen" I cannot imagine.

† Captain Legge resides (if still living) at Hobart, Tasmania.

I hope that what I have been able to tell you has awakened or indeed increased your legitimate interest in and appreciation of the exhibited works. I think I may for to-day leave this portion of our subject with almost the same words with which I ended a more cursory discussion of the plates at a meeting of the Ned. Ornith. Vereeniging: Assuredly it must be acknowledged that both the artist "by the gift of God" de Bevere, as well as Loten, who got him to paint the plates, added his notes to them, and brought them under the notice of men of science, have gained for themselves a peculiar merit in connection with the study of natural history in the tropical regions."

SECTION II.

Thinking that some readers of my address at the annual meeting of the Council of the Museum in 1905, printed in the *Indische Mercuur* of 6th June 1905, may possibly take sufficient interest therein as to wish to know something more regarding the two naturalists mentioned and their work, I give below some additional particulars with which further investigation has supplied me, and which on various points supplement what was then said at Haarlem.

Regarding the artist de Bevere himself I have not succeeded in finding anything additional, though, on the other hand, something regarding his Dutch grandfather, the Major de Bevere mentioned by Loten; namely, we find entered in A. J. van der Aa's *Biographisch Woordenboek*, 8th edition of 1854, vol. ii., pt. 2, on p. 488: "Willem Hendrik de Beveren, captain in the service of the E. I. Company," and, on the authority of Fr. Valentÿn's *Oud en Nieuw Oost-Indië*, vol. iv., pt. 1, pp. 162 and 168–200,* mention made of his military services in 1706, during the war in Java against Soeropati, in which, led on by his "indomitable courage," he ventured too far into the enemy's territory and suffered a defeat, in consequence of which he was summoned before the court-martial and

---

* These figures are taken from Valentyn's index, which is very defective and sometimes incorrect. See the figures in the footnotes further on.

acquitted only in 1708. To this had undoubtedly powerfully contributed his valiant bearing, of which Valentÿn himself was a witness, at the storming and capture of the fortress of Bangil, in which, in spite of the lack of storming ladders, he was the first on the wall, was thrown down from it by the blow of a pike, which luckily glanced off on his sword-knot, thereupon succeeded in getting upon the wall once more and planted the standard on it, whereby the honour of the capture was due to him.

Valentÿn further relates that in 1708 de Bevere, still with the rank of captain, was sent to Ceylon, and there took part in an expedition against the emperor of Candi,* but thereafter again had unpleasantnesses with the Company, which Valentÿn hopes to recount later. I have however sought in vain in this writer's great work, in the part that treats of the affairs of Ceylon and describes the periodical events in that island only to 1707,† for anything further regarding de Bevere.

There is no doubt, however, that he was the major of whom Loten makes mention as the grandfather of our artist. That the latter was named de Bevere, is probably in consequence of the often careless spelling of those days; but the difference may also be intentional on account of the illegitimate origin.‡

Perhaps the papers left by Loten and perused by Prof. P. J. Veth might have furnished some further light, both as regards the de Beveres and as regards the testator himself and his family. It is therefore doubly unfortunate that they were presumably considered by one or other of their possessors as of no value and destroyed.

When Prof. Veth consulted them they belonged to Mr. J. A. Grothe, who, as I am told by Mr. S. Muller, Fz., the national archivist at Utrecht, on several occasions presented the manuscripts that he possessed to the Utrecht archives, the Academy

* This is incorrect, as will be seen by the quotation I give under Sec. III. The expedition was *to*, and not *against*, the "emperor of Candi."

† Mr. van Houten has been misled by the date erroneously continued at the top of the later pages of Valentyn's history. As a matter of fact, the affairs of Ceylon are chronicled (in a very summary manner, it is true) down to 1724 on p. 360.

‡ The former explanation is the more probable: Valentyn himself uses both forms.

Library, and other public institutions. After his death some family papers were also presented to the national archives, but the papers in question were—so Mr. Muller assured me—with neither one nor the other, and Mr. Grothe's son, Mr. Grothe van Schellach at Utrecht, did not know the documents. Even less has been the result of an inquiry, instituted by me, of the late Prof. P. J. Veth's son, Dr. K. J. Veth, and further by Mr. L. D. Petit, Conservator at the Academy Library at Leiden, in which are some of the papers left by Prof. Veth, and of Prof. de Goeije, who arranged the literary remains of the said scholar, but had not met with the required documents among them.

Regarding Joan Gideon Loten, on the other hand, I can, in the way of supplement, now relate considerably more, thanks to the help of Messrs. G. P. Rouffaer and P. A. M. Boele van Hensbroek, as well as the gentlemen already named, Mr. S. Muller, Fz., and especially Mr. Grothe van Schellach, who was able to draw therefor from family papers.

In the first place, I can by this means refer to the short biography, to be found on page 651 of vol. xi. of A. J. van der Aa's *Biografisch Woordenboek* (Haarlem, 1865), where, however, Loten's services as Governor of Macassar * are alone extolled, and in particular mention is made of a fine map in 19 sheets of Celebes, which he caused to be prepared by his bookkeeper Jean Michel Aubert.†

In the second place, one finds some details in the *Bijdragen van het Koninklijk Instituut van Taal-, Land- en Volkenkunde van Ned.-Indië* 4th series, vol. v. (1881), from the hand of P. J. B. C. Robidé van der Aa, in his paper "The Great Bantam Rising in the Middle of Last Century," where the important rôle filled in 1752 by Loten, at that time councillor extraordinary, as commissary sent to the Bantam court, is described, and a report from his hand printed; whilst in an appendix (pp. 49–53) the writer relates one thing and another further regarding Loten's career.

---

* 1741–50 (see *supra*).

† This map is mentioned by Robidé van der Aa (*u. i.*), who says that it is in the Bodel-Nyenhuis collection.

Utrecht was Loten's earlier place of residence.* From my papers I can also add to this that, as appears from a letter dated Colombo, 27th January 1756, treating of a consignment of natural curiosities, there then lived in Utrecht also a brother, Arnoud Loten, who also became burgomaster of this town, and died only in 1801, and in the female line was an ancestor of the present Grothe family.†

On the authority of Prof. Veth, van der Aa also adopts erroneously the year 1732 as that in which Loten was appointed fiscal at Samarang ("before his arrival at Batavia," says the relater) and on 24th August of the same was married. The information that both here forgot is to be found in the epitaph of Mrs. Loten, *née* van Beaumont, in the old Dutch church inside the fort ‡ at Colombo, to be found on plate 25 in the work cited by van der Aa himself, *Lapidarium Zeylanicum, being a Collection of Monumental Inscriptions of the Dutch Churches and Churchyards of Ceylon*, by L. Ludovici, Colombo, 1877.§ We there read that she was born on 13th November 1716 at the Cape of Good Hope, married 24th August 1733, and died 10th August (not 11th August, as Prof. Veth stated) 1755.

Van der Aa surmises that Mrs. Loten was a daughter of the independent fiscal Cornelis van Beaumont, who died at the Cape of Good Hope in 1724.‖ According to the same

---

* But not his birthplace : see *infra*.

† See further regarding Arnoud Loten under Sec. III. According to Valentyn (i. 290), a "Josef Lothen, independent fiscal," commanded the return fleet from Java to Holland in 1721; and in the additional list of subscribers to Valentyn's great work (given at the end of vol. v. pt. 2) appears "Joseph Loten, lord of Bunnick and Vechten, Wittevrouwen and Abstede, as also canon to the chapter of the cathedral at Utrecht," who evidently was a relative of Joan Gideon's.

‡ Wolvendaal church is *outside* the Colombo fort.

§ See also C. As. Soc. Jl. xv. 235, xvii. 18.

‖ Kornelis van Beaumont, under-merchant and *dispensier* at Colombo, appointed independent fiscal at the Cape of Good Hope 1712, and arrived there 1713 (Val. *Beschr. v. Bat.* iv. 383); held office 1712–24, when he died (Id. *Beschr. v. d. Kaap d. G. H.* 41). See also C. As. Soc. Jl. xvii. 16, where van Beaumont's wife's name is given as Deliana Blesius, and she is said (? erroneously) to have died in Colombo on the same day as her daughter, Loten's wife. (She is also confused with her sister, Johanna Gysberta.)

informant Loten made his later voyage to the Cape* wholly as a private individual, and also because an inheritance had fallen to his then deceased wife.†

With respect to the later dispute of Loten's with the East India Company regarding the deductions made in the repayment of the loan of 100,000 rixdollars, van der Aa, "after a careful perusal of the request," judges unfavourably of Loten's complaint and demand, and even says further that "Loten's actions and monetary concerns cannot perhaps in any respect stand the test of careful investigation." For our part, however, in like manner, after a careful perusal of the documents, we, as in truth Prof. Veth, do not regard Loten's demand as in any sense unreasonable, and consequently van der Aa's suspicion of his rectitude is not justified.

Returning now to Loten himself, I can, thanks to Mr. Grothe's communications, correct, and at the same time to a large extent supplement, Robidé van der Aa's statements.

He was born 16th May 1710 at Scadeshoeve, in the parish of Maartensdÿk, and had as parents Jean Karel Loten, secretary of the Lekdijk Benedendams and steward of the convent of Marie Magdalena at Wijk-bij-Duurstede, and Arnoudina Maria Aerssen van Juchem.

The Lotens were of Flemish origin. In 1461 an ancestor appears as burgomaster of Aardenburg.

Mr. Grothe also informs me that Loten, while residing in England, was married a second time, on 4th July 1765, at Banstead in Surrey, namely, to Letitia Cotes, daughter of Digby Cotes and Elizabeth Bannister, who survived her husband and died 11th June 1810.‡

In the plate given in the work mentioned, of the tombstone of Mrs. Loten, appears also a representation of her arms,§

---

* In 1775–6 (see *supra*).

† Loten had then been ten years married to an English wife (see below).

‡ Regarding this second marriage see under Section III.

§ Cf. C. As. Soc. Jl. xv. 235 and 229. Owing to the ignorance of the lapidaries or of the artist, the van Beaumont arms are very faultily represented in the plates 16 and 25 of *Lapid. Zeyl.* For instance, in plate 16, the lion in the crest, which Mr. de Vos describes as issuant,

namely, a scutcheon divided into two halves longitudinally, in which in the right half on a golden field a green thistle-branch forming two shoots [*loten*]—the arms of the Lotens ; and the left half divided into quarters, the uppermost displaying a rampant black lion on a golden (?) field and underneath a golden ship on a blue field—the arms of the van Beaumonts.

Some days before the death of Mrs. Loten there died in very early youth the only grandchild, also mentioned on the said tombstone, as Albert Anthonie Cornelis van der Brugghen. We see from this that at that time Loten's only child was also staying in Colombo, perhaps also her husband,* regarding whose identity van der Aa hazarded a guess, which seems to have been incorrect ; since Mr. Grothe van Schellach wrote to me concerning this wife as follows :—" Armandina † Deliana Cornelia [the daughter of Loten], the date of whose birth is unknown to me,‡ was married 19th July 1752, at Batavia, to Dirk Willem van der Brugghen, born at Bergen op Zoom, 4th February 1717, upper merchant and chief at Soerabaia, whence he returned home in 1758.§ He died at Utrecht, 7th October 1770, she at Batavia, 15th May 1756. They had two children."||

Besides the above-named daughter, who was his second child, Loten had by Anna Henriette van Beaumont two other children ; the eldest was a daughter, born 16th October 1734, and soon died, on 30th April 1735 ; the third, a son, died an hour after birth.

---

is more like a lion rampant ; while in plate 25 the lion, which in plate 16 is correctly shown as passant (not passant guardant—" leopardé " —as Mr. de Vos has it), is assuming a rampant attitude. The form of the ship also differs considerably in the two plates.

* There is no proof of this. Mrs. van der Brugghen may have been on a visit to her parents without her husband.

† This is evidently a misprint or misreading for *Arnoudina*, which was the name of Loten's mother.

‡ As Loten's first child was born 16th October 1734 we may, I think, safely place the birth of this second daughter in the latter part of 1735. This would make her barely 17 years old at the time of her marriage—about the same age at which her mother married Loten.

§ In the same ship as Loten probably.

|| Regarding these children see at end of Section III.

In later years * Loten returned from England to the fatherland, fixed his abode at Scadeshoeve—at least in the summer—and died, as appears from the register of deaths consulted by Mr. S. Muller, in the burgess rank, on 25th February 1789, at Utrecht, " at the Drift near the Wittevrouwenbrug."

In conclusion, something further regarding the history of my collection of plates.

Robidé van der Aa had suggested 1790 as the probable year of Loten's death, referring to the *Kunst- en Letterbode* of 1790, p. 34 (should be vol. ii., p. 34). On consulting that work, one reads there under the short reports :—

" Haarlem. List of presents to the Dutch Society of Sciences since 25th May 1789 to 21st May 1790. For the room of natural curiosities. A collection of about 130 very fine drawings of mostly East Indian and rare birds, as also of some four-footed beasts, fish, crabs, sea-polyps, insects, and plants, by legacy of the late Mr. Joan Gideon Loten, in his lifetime former councillor of Netherlands India and Governor of Ceylon."

At once surmising that this report referred to my own plates, I applied through the medium of Dr. Greshoff to Prof. Dr. J. Bosscha at Haarlem, secretary of the Dutch Society of Sciences, whereupon I received the following reply :—

" Here is what my investigations have yielded. In the minutes of the meeting of directors of 4th August the following is recorded :—

'The president also communicated that Mr. J. Kol had informed the secretary under date Utrecht, 18th July last, that the late Mr. Joan Gideon Loten, in his lifetime former councillor of Netherlands India and Governor of Ceylon, by a codicil dated 13th October 1778 had engaged to have transferred to this Dutch Society of Sciences his collection of drawings and sketches made in East India, as these shall and are to be found in a large copper box † among his movables, on application for the said legacy, in exchange for a proper receipt in discharge of the informant as executor of the deceased's estate,—that on the same date, the secretary having been requested and qualified therefor, this transfer

* Apparently about 1783 (see under Section III.).

† See at end of Section III. regarding this legacy.

was carried out, and the said copper box with the said drawings and sketches, and various additional prints in sepia and several English prints of natural objects, were obtained by the secretary, and laid on the table for inspection, which was carried out and the informant thanked for his communication ; it was also resolved to thank in the friendliest manner the said Mr. J. Kol in the name of the Society for his trouble in this matter, as also to offer to pay the expenses incurred therein with thanks, as is fair.

" Of this collection nothing is now to be found either in the library or in the archives. I imagine that the copper box together with its contents was in the collection of natural curiosities that the Society at that time possessed, but that was removed in 1866 (see Memorial of the 150th anniversary of the Dutch Society of Sciences, 1902, p. 28). On that occasion the copper box with plates was doubtless also given away, to whom or to what institution is no longer to be ascertained."

This letter as well as the extract quoted from the old *Kunst. en Letterbode* fits in so wonderfully well with my collection, that at this moment I can entertain not a shadow of a doubt that it is the legacy of Mr. Loten to the Dutch Society. Only the vicissitudes of the plates between the year 1866, when the Society mentioned had its "great dispersal," and the time when the firm of Nijhoff got them into their possession, which by my orders they bought for me on 13th February 1885, remains as yet a bit of unrecorded history. Mr. Boele van Hensbroek wrote to me : "They belonged to me, and formed part of a large lot of books, &c., that I had taken over from the late art dealer A. G. de Visser. Whence the latter had the drawings can no longer be traced." Of the copper box spoken of there is at present even less of any trace to be discovered.

And here also for the moment my knowledge of the matter stops. Meanwhile I shall be indebted for all further references or information that anyone can send me regarding the principal persons here brought on the stage, or their adventures and employments.

The Hague, February 1906. v. H.

SECTION III.

So far Mr. van Houten. To supplement the details given above regarding de Bevere and Loten and the paintings, I here add what further information I have been able to collect.

First, as to the artist and his family.

From Mr. F. H. de Vos of Galle I learn that Willem Hendrik de Bevere of Oosterwijk came out to East India as an ensign in 1688 by the ship *China*. Where he served during the first few years, and when he was promoted, I do not know,* but in 1696 he was in Amboina with the rank of lieutenant,† which position he held until 1702, when he became captain-lieutenant.‡ In this capacity he commanded an expedition against certain runaways in 1705.§ At the end of this year, or in 1706, as captain he left Amboina for Java to take part in the expedition against Soerapati, arriving by the ship *Schoondyk* at Japara on 23rd July ;|| and on 15th August we read of him as being present at a reception by the Depati of Soerabaja, to which he had brought the old prince of Madura.¶ Under date 20th August, Captain de Bevere is referred to as commanding a brigade ;** and under 23rd August we read that this brigade consisted of 723 men.†† On 4th September, Valentyn says, he accompanied Captain de Bevere to the quarters of Captain van der Horst, who had invited his brother officers and other guests to an entertainment, details of which

---

* Very likely these years were spent in Batavia, for which place Valentyn's lists of ensigns and lieutenants are very defective (see *Beschr. van Batavia* 417, 416). A relative, Gerard de Bevere, occupied positions of importance in Batavia at this time, being a councillor extraordinary of India, 1687–90 (Val. *Beschr. van Bat.* 372), advocate fiscal 1688 to May 1690 (ibid. 379), and president of aldermen 1688 to 13th May 1690 (ibid. 391). I have found no other references to him.

† Val. *Ambon. Zaaken* (vii.) 44 and 259.

‡ Id. 44, 35, and 27, where he appears in the list of chief officials for 1704.

§ Id. 261 and (vii.) 27, where, in the list for 1705, "left" is appended to his name.

|| Val. *Beschr. van Groot Java* 155. Valentyn accompanied this expedition as assistant chaplain.

¶ Ibid. 158, 159. ** Ibid. 162. †† Ibid. 163.

are given.* On 11th September Commander Govart Knol, with the brigade of Bintang, de Bevere, and van der Horst, set out against the enemy, accompanied by Valentyn,† who in the following pages gives minute details of the expedition, de Bevere's name often appearing,‡ especially in connection with his unfortunate defeat and his subsequent courageous behaviour at the capture of Bangel on 16th October (both of which events have been referred to by Mr. van Houten above). From Valentyn's statements it would appear that de Bevere's conduct in attempting to justify his behaviour in connection with the former affair was not very straightforward.§ However, he seems to have succeeded ultimately in clearing himself, for, in detailing the events that took place in Java in 1708, Valentyn || says :—

In the meanwhile the trial of the affair of de Bevere at Batavia was finished, he, in consequence of his defence, acquitted, and not long afterwards sent as captain to Ceylon, where he remained some years, but in the end, having come back from an expedition to the emperor of Candi, was again at loggerheads, as we shall see more fully under the affairs of Ceylon.

When Valentyn came to describe the affairs of Ceylon he seems to have forgotten his promise, or to have changed his mind ; for he does not even mention de Bevere, nor does he say anything regarding the expedition which had such an unpleasant result for the captain. That the latter left Java for Ceylon towards the end of 1708 seems probable, though Valentyn does not give the date ; and it is possible that he went in one of the ships that sailed from Batavia in October conveying to Ceylon as a state prisoner the Pangerang Depati Anom, with his three sons, nineteen wives, and suite of fifty-two men.¶

While in Ceylon Captain de Bevere was in command of the militia in Colombo.** It was at this time that (as mentioned by Mr. van Houten above) he formed the liaison, the fruit of

* Ibid. 169.

† Ibid. 170.

‡ See 172, 174, 178, 179, 181, 182, 186, 187.

§ See 181, 192, 193, 197.

|| *Loc. cit.* 200.

¶ Val. *loc. cit.* 203.

** So Mr. F. H. de Vos informs me, without giving his authority.

which was the father of Loten's artist protegee.* What the name of Captain Willem Hendrik de Bevere's son was, we are not told by Loten. Mr. de Vos, however, tells me of a "David Willemsz de Bevere, of Batavia, an assistant O. I. C., who married (2) in Colombo, 15th January 1736, Elizabeth Andriesen of Trincomalee,"† and who, Mr. de Vos thinks, was a son of Captain de Bevere's. If this actually be the father of the artist, the latter may have been a child by the first wife,‡ whose name Mr. de Vos does not give.

With respect to the mysterious affair which involved the hot-headed captain in further trouble, I think that the following extract from the *Beknopte Historie van de Voornaamste Gebeurtenissen op Ceilon*§ may afford some light :—

> In the beginning of the year 1714 an ambassador who had gone up with the usual yearly presents, and had been received very friendlily at the court, was indiscreet and foolhardy enough, on retiring thence, to have recourse, contrary to all imagination, to unheard of grossnesses and conduct shameful to our nation, in consequence of which there was the greatest uneasiness in Colombo : nevertheless not the slightest harm came to him or to his suite, at which one could not help being surprised. On this account, in order to prevent the consequences of such illbred and improper behaviour, it was thought well at once to send an ola to the court and therein to offer apologies, with a promise that the ambassador's conduct should be rigorously punished, with which the court then appeared to be satisfied, since in this and the following year 1715 matters continued in peace.

Taking all things into consideration, I think there can be hardly any doubt that the ambassador here spoken of was Captain de Bevere,|| and that the "loggerheads" (*strubbelingen*) spoken of by Valentyn were the consequence of his

---

* Loten, as quoted by Mr. van Houten above, says that in 1755 "Major" de Bevere's son "seemed about 50 or 55." But, as Captain de Bevere did not arrive in Ceylon until the end of 1708, his son could not possibly have been more than 45 or 46 in 1755.

† Mr. de Vos adds the names of several descendants of this couple.

‡ What Loten says, however (*u. s.*), seems to disprove this.

§ See also C. As. Soc. Jl. xi. 116, where, however, the translation is rather free.

|| An examination of the Dutch records in Colombo would probably settle the question.

outrageous conduct.* In any case he seems to have left Ceylon for Batavia in 1714 or 1715, for in the latter year, according to Valentyn,† he was one of the captains at the Rotterdam gate in Batavia, as well as captain of the castle and major for a while. In 1717, according to the same authority,‡ de Bevere received the permanent appointment of captain of the castle, a post which he held until 1719, when he died.§

That Captain de Bevere left behind him in Ceylon his mistress and child seems certain ; and, judging by Loten's words quoted by Mr. van Houten above, it would appear that though brought up respectably and as a Christian, this child, on attaining adolescence and manhood, displayed no uncommon qualities to call for special mention, else Loten would surely have said something of them. Regarding this man and his talented son we shall probably never learn more than what Loten has told us.||

Let us now turn to Loten himself. As the events of his life recorded by Mr. van Houten in his two papers are set down in a somewhat haphazard manner, it may be as well to tabulate them here according to chronological sequence. They are as follows :—

1710	16 May	..	Loten born at Scadeshoeve.
1732	4 Jan.	..	L. sails as under merchant for East Indies.
,,	Aug.	..	L. arrives at Batavia.
1733	10 July	..	L. appointed fiscal, Java's north coast.
,,	24 Aug.	..	L. married at Batavia to Anna Henriette van Beaumont.
,,	10 Sept.	..	L. leaves Batavia for Samarang.
,,	29 Sept.	..	L. arrives at Samarang.
1734	16 Oct.	..	L.'s eldest child born.

* For which he had not the excuse that justified the behaviour of an earlier ambassador—a soldier to boot—Henricus van Bystervelt in 1671 (see C. As. Soc. Jl. xi. 355–76, Knox *Hist. Rel.* 181).

† *Beschr. van Bat.* 415.

‡ Ibid. 414.

§ Ibid. That de Bevere does not appear to have been punished, but rather to have been promoted, need not surprise us : compare the case of Overschie and Thyssen in 1645 (see C. As. Soc. Jl. xviii. 189 and 260 n. 146).

|| Unless, indeed, it be from the Wolvendaal church records and the Dutch archives in Colombo.

1735	30 April	..	L.'s eldest child dies.
1740	6–10 Nov.	..	L. makes excursion inland.
1741	—	..	L. returns to Batavia.
1744	2 Mar.	..	L. leaves Batavia for Macassar as Governor.
,,	24 Mar.	..	L. arrives at Macassar as Governor.
[1747	Dec.]	..	L. appointed councillor extraordinary of N. I.
1750	[17 Oct.]	..	L. leaves Macassar for Batavia.
1752	[Mar.]	..	L. sent as commissary to Batavia.
[,,	April	..	L. returns to Batavia.]
,,	19 July	..	L.'s daughter married at Batavia to Dirk Willem van der Brugghen.
,,	—	..	L. leaves Batavia for Ceylon as Governor.
,,	30 Sept.	..	L. arrives at Colombo.
1754	24 Mar.	..	L.'s grandson born at Colombo.
[,,	Oct.]	..	L. appointed councillor ordinary of India.
1755	30 July	..	L.'s grandson dies at Colombo.
,,	10 Aug.	..	L.'s wife dies at Colombo.
1756	15 May	..	L.'s daughter dies at Batavia.
1757	18 Mar.	..	L. leaves Ceylon for Batavia.
1758	—	..	L. leaves Batavia for Holland.
,,	—	..	L.'s son-in-law leaves Batavia for Holland.
,,	June	..	L. arrives in Holland.
1763	—	..	L. visits France for health.
1765	4 July	..	L. married at Banstead to Letitia Cotes.
1770	7 Oct.	..	L.'s son-in-law dies at Utrecht.
1775	4 Nov.	..	L. leaves for Cape of Good Hope.
1776	17 Feb.	..	L. arrives at Cape of Good Hope.
1777	7 Mar.	..	L. leaves Cape of Good Hope for Holland.
,,	13 June	..	L. arrives at Texel.
1778	13 Oct.	..	L. bequeaths paintings, &c., to Dutch Society of Sciences, Haarlem.
1789	25 Feb.	..	L. dies at Utrecht.
1810	11 June	..	L.'s widow dies.

It will have been noticed that Mr. van Houten gives no information regarding Loten's history from the time of his birth until his departure for the East Indies in his twenty-second year ; and I am unable to throw any light on this period of his life. Nor can I add to the details furnished by Mr. van Houten concerning Loten's career in the East, beyond those I have given in footnotes to his two papers. As regards the third and longest portion of his life, I can supply a few additional

facts, which are the disappointingly meagre result of the research I have made in all the sources that seemed likely to yield information.*

As we have seen, Loten left the East for good in 1758, arriving in Holland in June of that year. He was then in the prime of life, was possessed of considerable means, and had no family ties.† He was therefore able to devote his whole time to his favourite study of natural history, and to carry on correspondence on the subject with various European naturalists. What his immediate movements were, after his arrival in Holland, I cannot say; but that he was in England in 1760 is certain.‡ In that year was published the second part of Edwards's *Gleanings of Natural History*, and in the list of subscribers to the work, prefixed to this part, appears the name of "John Gideon Loten, Esq."

The Royal Society, in recognition of the services that Loten had rendered to the cause of science, this same year (1760) conferred upon him the honour of their fellowship. His certificate,§ a copy of which I owe to the courtesy of Mr. Robt.

---

* The correspondence and memoirs of some of the men of science who lived in the latter half of the eighteenth century may possibly contain some mention of Loten.

† His two grandchildren accompanied their father.

‡ That he was in England in 1759 seems evident from the fact that some of Edwards's plates, painted from specimens belonging to Loten, are dated in that year (see further on).

§ It is signed by Professor Allamand, M. Maty, Th. Birch, Gowin Knight, and George Edwards. The last of these was the author of the books already mentioned and more fully dealt with below. The Rev. Thomas Birch was secretary of the Royal Society, 1752–85. Matthew Maty, a fellow-countryman of Loten's, was at this time an under-librarian in the British Museum (in 1772 principal librarian, in 1762 foreign secretary, and in 1765 principal secretary of the Royal Society). Gowin Knight was the first principal librarian of the British Museum, from its foundation in 1756 until his death in 1772. (See *Dict. of Nat. Biog.* regarding all four men.) Jean Nicolas Sébastien Allamand, a Swiss, was professor of philosophy and natural history at the university of Franeker in Friesland. He was elected a fellow of the Royal Society in 1746. His name is perpetuated in that of the genus of flowering creepers Allamanda. Evidently the above certificate was written by him. (See further regarding him in *Nouv. Biog. Gén.* ii.)

Harrison, Assistant Secretary of the Royal Society,* runs as follows :—

Monsieur Joan Gideon Loten, ancien Gouverneur de Ceylon, est un homme si distingué par sa naissance, par les emplois dont il a été revetu, par son mérite et ses belles connoysances dans diférentes parties de la Philosophie, qu' il ne peut que faire honneur à toute Société Literaire qui le reconnoitra pour un de ces membres. J' ose dire en particulier que sa profonde estime pour la Soci té Royalle de Londres et pour les excellens ouvrages de ceux qui la compose le rend bien digne d'être aggrégé à cet Illustre Corps.

Translation.

Mr. Joan Gideon Loten, former Governor of Ceylon, is a man so distinguished by his birth, by the offices with which he has been invested, by his merit and his fine attainments in different branches of Philosophy, that he cannot but confer honour upon any literary society that shall recognize him as one of its members. I may say in particular that his profound esteem for the Royal Society of London and for the excellent works of those that compose it render him very worthy of being added to that illustrious body.

On 27th November Loten was balloted for and elected, and on 11th December was admitted as a Fellow of the Royal Society.†

It was doubtless at this time that Loten took up his residence at Fulham, as referred to by Mr. van Houten above; though when that residence began, and how long it continued, I have not been able to discover.‡ In any case, it is certain that he spent a number of years in England,§ becoming almost

* Mr. Harrison has also made a search among the records of the Royal Society, but has found no further reference to Loten.

† Loten's name appears for the first time in the "List of the Royal Society" for 1761, and (it should be noted) not among the "persons of other nations," but as "John Gideon Loten, Esq."

‡ Mr. C. J. Feret's elaborate work, *Fulham Old and New* (1900), contains no reference to Loten.

§ In 1763, as Mr. van Houten mentions, he visited France for the benefit of his health.

naturalized,* learning to use the English language like his mother tongue, and marrying an English wife. This last fact Mr. van Houten has mentioned above; and it is recorded in the following notice, which I copy from the *Gentleman's Magazine* for 1765 (vol. xxx. p. 346):—

July 4. John Gideon Loten of New Burlington-str. Esq;—to Miss Coates, neice [*sic*] to the countess of Northington.

Taking the above with what Mr. van Houten tells us, it seems that Loten was married at Banstead in Surrey (the residence, apparently, of his bride's widowed mother) to Lettice Cotes,† whose father, the Rev. Dr. Digby Cotes,‡ was connected with the peerage; and further, that Loten had taken a house in New Burlington Street, in the heart of London, as a permanent residence. That this was the case is evident from the following notice of the death of Loten's widow forty-five years later§ (*Gent. Mag.* lxxx. (1810) 672):—

June 11. In New Burlington-street, the widow of John Gideon Loten, esq. formerly Governor of Ceylon, and grand-daughter to William Lord Digby.

That this marriage was childless is certain; but of Loten's domestic life I know almost nothing. A somewhat cursory

---

* Notice how, in the authorities I quote, his name is always given in English form. I cannot help thinking that Loten had some reason other than his love of science that led him to reside in England. The relations of the English and Dutch in the East were at this period somewhat strained (see Willson's *Ledger and Sword* ii. 140–3); and Loten's pro-English likings could hardly have tended to increase the affection of the N. E. I. Co. towards him.

† Not Letitia, as Mr. van Houten has it. Lettice was a Digby family name.

‡ In the notice of his death, 11th January 1745, in the *Gent. Mag.* xv. 52, he is thus described:—"Rev. Dr Digby Coates, rector of Coleshill, Warwickshire, prebendary of Litchfield, and principal of Magdalen Hall, Oxford." For further particulars regarding him, others of the Cotes (or Coates) family, their connection with the Digby family, and Coleshill, see Foster's *Alumni Oxonienses*, Early Series i. 332, Later Series i. 301; *Gent. Mag.* lxiii. (1793) 283–4; Dugdale's Antiquities of Warwickshire (1733), 1006–20.

§ And just over a hundred years after Loten's birth. When the second Mrs. Loten was born, I have not discovered.

perusal of Loten's lengthy will* and that of his widow at Somerset House has furnished me with some interesting details; † and were the former document copied and printed‡ it would throw a good deal of light upon Loten's family history. I find, among other particulars, that Loten had in his household a faithful female freed slave named Sity, a native of Celebes. It would appear, judging from the dates of the various codicils, that Loten's residence in England continued until about 1781 or 1782,§ and that after that date he settled down in or near Utrecht, where, as Mr. van Houten has stated, his brother Arnoud was burgomaster,|| and his two grandchildren¶ probably lived. That Mrs. Loten also removed to Holland is probable, though I have no proof of it; but that she visited Utrecht at some period we know from her will.** After her husband's death, at any rate, we may be sure that she once more took up her abode in New Burlington Street, where, as we have seen, she died. Her body was doubtless buried, as in her will she desires it to be, in the chancel of the church at Coleshill, of which her father had for so many years been

* With the various codicils, it covers some 16 folio pages. The will itself is dated in 1767, the codicils bear various dates down to almost the year of Loten's death, the later ones being translations from the Dutch.

† Unfortunately, the notes I had made were impounded by a soulless official on the ground that they were "revenue": hence I have to rely on my memory.

‡ Mrs. Loten's will cannot be copied, as it falls within the prescribed period.

§ Compare what Forster says, in the extract quoted below. One incident of Loten's later years, recorded by Robidé van der Aa in the work quoted above, Mr. van Houten has omitted to mention, namely, that in 1775 Loten was in correspondence with the noted hydrographer James Dalrymple regarding a map of Celebes (doubtless the one in 19 sheets by Jean Michel Aubert spoken of above).

|| This fact is also mentioned in Loten's will, from which, moreover, we learn that Arnoud had a son and a daughter, the former being a namesake of Loten's.

¶ These, a son and a daughter of Dirk Willem van der Brugghen, are referred to by Loten in his will. The daughter married (if my memory is correct) a Mr. Wilmersdorf, from whom she afterwards separated.

** In which she leaves valuable rings to two ladies who were kind to her in a serious illness that she had when in Utrecht.

vicar, and where, in all probability, she was born. That Loten was possessed of considerable property, in Holland as well as in England, is amply proved by the many and valuable bequests* devised by him in his will and its half-dozen codicils.

Now as to Loten's collection of paintings. I have said above that the second part of Edwards's *Gleanings of Natural History*, in which Loten's name appears as a subscriber, was published in 1760. The third and last part was issued in 1764; and in the list of subscribers we find "John Gideon Loten, Esq; F.R.S. 2 Books." But an examination of the volume shows us that Loten had done more than subscribe to the work; for at page 229,† in chap. cvi., which describes plate 316, "The Great Black Cockatoo,"‡ we read:—

> This figure was taken from a drawing § done from the life, of its natural size, by the order of John Gideon Loten, Esq; late Governor in the Island of Ceylon, and other Dutch settlements in the East Indies. I shall take this earliest opportunity gratefully to acknowledge the high obligations I owe to this worthy and curious|| Gentleman, as he hath contributed every thing in his power to assist me in the completion of this work, by furnishing me with many new and curious natural specimens in high preservation, as well as curious drawings after nature. He has also greatly obliged the curious ¶ of these kingdoms, by presenting to the British Museum a very large, curious, and valuable collection of original Drawings, in water-colours, of the most curious Animals, Vegetables, &c. the productions of India; together with many specimens of the natural productions, well preserved; all which have been helps to me.

---

* Among these are some Ceylon "curios." A valuable collection of shells made by him Mrs. Loten bequeathed to his nephew or grandson (I am not sure which). Loten also had a number of valuable books, which he left by his will to one or other of these. As regards his natural history paintings, see further on.

† The pagination is continued from the previous parts, this part beginning with p. 221.

‡ This plate is dated 15th October 1761. (The plates, it will be seen, are arranged scientifically, not chronologically.)

§ See what is stated below in the description of plate 338.

|| This word has here one of its obsolete meanings—studious, diligent, or exact.

¶ That is, connoisseurs.

Again, on pp. 237–8, chap. cxi., describing plate 321, "The Green Pye of the Isle of Ceylon,"* we read :—

This bird was brought, with many others, from the East Indies, by John Gideon Loten, Esq; F.R.S. late Governor of Ceylon, &c. who presented them to the British Museum, where they now remain.

On p. 244, chap. cxiv., describing plate 324, "The Short-tailed Pye,"† it is stated :—

The bird here figured and described was brought by Governor Loten from the Island of Ceylon, and is deposited in the British Museum.

On pp. 245–6, chap. cxv., describing plate 325, "The Crested Long-tailed Pye,"‡ we are told :—

This curious bird was brought from the Island of Ceylon by my worthy friend John Gideon Loten, Esq; and is now preserved in the British Museum.

Yet again, on pp. 247–8, chap. cxvi., in which is described plate 326, "The Blue Jay from the East Indies,"§ it is said :—

The subject from which I draw my figure was brought from Ceylon by John Gideon Loten, Esq; and is now preserved in the British Museum.

Then, on pp. 269–70, chap. cxxviii., describing plate 338, "The Great Crowned Indian Pigeon,"|| Edwards says :—

This Bird, and that figured Pla. 316, are all that have been figured from drawings in these last fifty plates of my work: but as they were new to me, and the testimony of their authenticity most undoubted, I was glad of an opportunity to engrave them. The original is one of those that Governor Loten before-mentioned caused to be drawn from the life in India, and is now deposited, with many others brought from thence, in the British Museum. Mr. Loten brought several of them alive from India,¶ and presented them to the late Princess Royal of Great Britain, Dowager Princess of Orange, &c.

---

* This plate is dated 1st October 1759.

† Plate dated 6th October 1759. Cf. Loten's remarks on this bird, quoted by Mr. van Houten in his first paper.

‡ Plate dated 4th April 1760. It bears a reference to Knox's *Historical Relation*, p. 27, and in the letterpress the passage is quoted from Knox's work.

§ Plate dated 20th September 1759.

|| Plate dated 8th October 1761.

¶ See the statement in Mr. van Houten's first paper.

On pp. 282–3, chap. cxxxv., is a description of plate 345, "The Hoopoe,"* in which we read :—

It is an Insect-eater, and is found (perhaps in winter only) in Ceylon in the East Indies. I have seen a very exact drawing of it, as to size, shape, and colour, done from the life in the East Indies by the procurement of John Gideon Loten, Esq ; F.R.S. late Governor of the Island of Ceylon.

Again, on pp. 285–7, chap. cxxxvii., plate 347, "The Red-breasted Green Creeper," &c.,† is described, and we are told that—

Fig. 1 was brought from the Cape of Good Hope by Governor Loten, and is now lodged in the British Museum.

Finally, on pp. 299–300, chap. clxiv., describing plate 354, "The Little Sparrow, and the Wax-bill,"‡ it is stated :—

The Wax-bill was brought from the East Indies by John Gideon Loten, Esq ; F.R.S.

I have quoted these extracts for two reasons. In the first place, they prove that Mr. van Houten's assertion, that Loten's plates "did frequent service for those in the well-known work of Edwards, *Gleanings of Natural History*," is incorrect ; since Edwards himself states distinctly that he used only *two* of Loten's (really de Bevere's) drawings for his book, the other six plates being drawn from specimens in Loten's collection. But I have made these quotations chiefly to draw attention to the statement in the first extract, which is repeated in briefer form in most of the other passages, to the effect that Loten had presented to the British Museum§ "a very large, curious, and valuable collection of original Drawings, in water-colours, of the most curious Animals, Vegetables, &c. the productions of India ; together with many specimens of the natural productions, well preserved." I have made inquiries in various departments of the British Museum, and searched contemporary records, printed and manuscript,

---

* Plate dated 1st September 1759. It is not copied from a Ceylon specimen.

† Plate dated 29th December 1760.

‡ Plate dated 27th April 1761.

§ The British Museum had been opened only a few years before (in 1759) in Montague House.

in the libraries there, but can find no trace, nor even a mention, of any such collection.* I cannot but think, therefore, that Edwards was under some misapprehension regarding the collection, which may have been placed by the owner in the British Museum on loan temporarily. In any case, we shall find that many of Loten's drawings were utilized for works later than Edwards's; and from the details given by Mr. van Houten it seems absolutely certain that the collection of paintings of which he is the fortunate possessor is the very same as that referred to by Edwards.

Edwards died in 1773; and in 1776 appeared a work intended, evidently, as a supplement to his two books, but very inferior to them in the execution of the plates.† This was the *New Illustrations of Zoology*, by Peter Brown,‡ who in his preface says:—

> Several plates are copied from the elegant Drawings, generously communicated to me by Gideon Loten Esq; and originally finished under his own inspection from living subjects, during his residence in the Islands of Java and Ceylon, of the latter of which he has been Governor for a considerable time.

To this is appended the following footnote:—

> A Certificate in Mr Loten's own hand-writing, declaring the Plates faithful copies of his valuable Drawings, is in the hands of Mr Benjamin White, Fleet-street, for the Inspection of such Persons who should like to be convinced of their Authenticity.

---

* Nor has a search instituted at the Natural History Museum at South Kensington proved any more successful, as Dr. Bowdler Sharpe kindly informs me.

† In his preface Brown speaks of his "feeble efforts;" but this may be mock modesty. Compare Legge's disparaging remarks quoted in the footnote at the end of Mr. van Houten's first paper.

‡ Pennant, in his *Literary Life* (25), says:—"In this year [1776] Peter Brown, a Dane by birth, and a very neat limner, published his illustrations of natural history in large quarto, with L. plates. At my recommendation, Mr. Loten lent to him the greatest part of the drawings to be engraven, being of birds painted in India. I patronized Brown, drew up the greatest part of the description for him, but had not the least concern in the preface." (The meaning of the last clause is, that Pennant is spoken of in flattering terms in the preface.) In his *Catalogue of My Works* (1786) Pennant gives the same facts in briefer form.

On p. 42 Brown speaks of "my worthy Patron John Gideon Loten, Esq.;" and from his statements throughout the work we find that in all 20 plates* are copies made from Loten's (de Bevere's) drawings, the majority being representations of Ceylon birds.†

Seven years after the appearance of Brown's book there was published, in 1781, at Halle in Germany, a folio volume by the eminent naturalist and traveller, Johann Reinhold Forster, bearing the title *Indische Zoologie*, and containing fifteen coloured plates, with detailed descriptions in German and Latin, of birds, &c.‡ From the preface I translate the following passages :—

Mr. Gideon Loten, who loved to investigate nature, occupied himself much therein, and with much assiduity also learnt the art of depicting objects of nature; when he was appointed by the Dutch East India Company Governor of the island of Ceylon he found in this island a large field for investigating the secrets of nature, and he applied himself thereto with great zeal and extraordinary diligence, as often as his incumbent public duties permitted him. He instructed several slaves§ himself in the art of drawing; and caused to be painted by them various new and to naturalists unknown Ceylon animals. After a laudably conducted administration he returned to Europe, and brought with him also all the beautiful pictures of animals. He afterwards married a

---

* Some of these are dated 1774 and 1775.

† The birds copied from Loten's drawings are as follows (all being Ceylon unless otherwise stated) :—Brown Hawk, Spotted Curucui, Red-crowned Barbet, Olive-coloured Warbler, Yellow-cheeked Barbet, Ceylon Black-cap, Javan Partridge, Purple Pigeon (Java), Pompadore Pigeon, Yellow-faced Pigeon, Yellow-crowned Thrush (Ceylon and Java), Yellow-vented Fly-catcher (Java), Red-vented Warbler, Yellow-breasted Fly-catcher, Green Warbler, Pink-coloured Warbler, Green Wagtail, Rail (two plates). One Ceylon bird, the Great Ceylonese Eared Owl, is not said to be copied from a plate of Loten's; but, as the latter's name is mentioned in connection with it, we may infer that it also is taken from a painting in Loten's collection.

‡ A second edition was issued in 1795, containing some additional matter, but the plates and descriptions being identical.

§ This is probably a misapprehension. As far as we know, de Bevere was the only person employed by Loten in the execution of his paintings, and he was certainly not a "slave." (Compare, however, Pennant's statement quoted in the footnote below.)

British lady, and was wont to live many months and indeed whole years in England.

Baronet Joseph Banks, the present president of the Royal Society of Sciences in London,* saw these pictures with Mr. Loten, and with the permission of the owner caused several of them to be copied. Soon afterwards however he resolved, by the advice of his friend Mr. Thomas Pennant, with the concurrence of Mr. Loten, to have a selection of these pictures well engraved in copper at their own joint expense. This was a singularly fortunate occurrence, for when Mr. Loten subsequently sent these paintings by ship to Holland, the ship was wrecked, and all the paintings were lost.

Fifteen copperplates had already been engraved, and twelve of them described by Mr. Pennant from Mr. Loten's written notes, when Mr. Banks in the year 1768 left for the South Seas, and began with Captain Cook the voyage round the world. Owing to my presence in England I was commissioned to translate Mr. Pennant's descriptions into French, which commission I undertook with much readiness and great care. Only as Mr. Pennant trusted an illiterate unknown French teacher more than me, the French, which was full of errors, was printed in England to the first twelve copperplates. After Mr. Banks had returned from his long voyage, he with Messrs. Loten and Pennant presented me, for the trouble I had had over the translation, with the ownership of the copperplates, together with the descriptions of them.

The statements made by Forster in the above extract are largely borne out by Pennant, who, in the "advertisement"† prefixed to the second edition (1790) of his *Indian Zoology*, says :—

This work, or rather fragment, was begun in the year 1769.‡ The descriptive part fell to my share : the expense of the plates was divided between Mr. Banks, now Sir Joseph Banks, Baronet ;

---

* Banks was chosen as president of the Royal Society in 1778, and was created a baronet in 1781.

† Dated 1st March, 1791, showing that the work was published later than the title-page (an engraved one by Mazell) states. This is confirmed by what Pennant himself says in his *Lit. Life* p. 40.

‡ It must have been in the early part of 1768 (see Forster's statement *supra*). In his *Catalogue of My Works* (1786) Pennant says : "In 1761, my *Indian Zoology* in folio appeared." (Then follow some of the details given above.) The date here given is, however, an obvious error, since, in his *Lit. Life* (9–10) Pennant distinctly assigns the work to 1769.

John Gideon Loten, Esq ; a governor in Ceylon ; and myself. Twelve only were engraved and published : soon after which the undertaking appeared so arduous that the design was given over. It would be injustice to Mr. Loten not to say that the etchings are taken from his fine collection of drawings made in India : for he alleviated the cares of life with the delicious pursuits of the study of nature. I prevaled [*sic*] on my two friends to unite with me in presenting the learned John Reinhold Forster with the plates. I also bestowed on him three others engraven at my own expense, before the work was dropped. These were never published in England ; but when Dr. Forster left our island, he took the whole with him, and in 1781 printed, at Halle, in Saxony, an edition very highly improved, and translated into Latin and German.....

Though neither Pennant nor Forster states the fact, the engraver of the fifteen plates* above spoken of was Peter Mazell ;† and it was in the execution of these that this man played such pranks with the original drawings lent by Loten

---

He also says :—" I was induced to prefer that [zoology] of India from my acquaintance with John Gideon Loten, esq. who had long been a governor in more than one of the Dutch islands in the Indian ocean, and with a laudable zeal had employed several most accurate artists in delineating, on the spot, the birds and other subjects of natural history. He offered to me the use of them in a manner that showed his liberal turn." (Then follow details similar to those given above.) Pennant rightly calls the first edition a "fragment," since it has no title-page or preface, and ends abruptly at p. 14.

* They are as follows :—i. The Long-tailed Squirrel ; ii. Black and White Falcon ; iii. The Little Horn Owl ; iv. The Red Wood-pecker ; v. The Faciated Couroucou ; vi. The red-headed Cuckoo ; vii. The black-capped Pigeon ; viii. The Tailor Bird ; ix. The red-tailed Water-Hen ; x. The white-headed Ibis ; xi. The black-backed Goose ; xii. The black-bellied Anhinga ; xiii. Spotted-billed Duck, The Tiger Shark, and The Ceylon Wrasse ; xiv. Double-spurred Partridge ; xv. Flammeous Fly-catcher. All of these are from Ceylon specimens, except iv. and vii.

† Bryan's *Dict. of Painters and Engravers* (new ed. by G. C. Williams, 1904) iii. 309 says :—" Mazell, Peter, an English engraver who flourished in the second part of the 18th century and worked for Pennant and Boydell, and all the engravings in Cordiner's ' Ruins and Romantic Prospects in North Britain ' (1792), are by him." Pennant in his *Literary Life* (3), speaking of his *British Zoology* (1761), says of the plates in that work : " They were all engraven by Mr. Peter Mazel, now living, of whose skill and integrity I had always occasion to speak well."

as to call forth the latter's wrathful comments quoted by Mr. van Houten in his first paper.*

But what are we to think of Forster's assertion, that " when Mr. Loten subsequently sent these paintings by ship to Holland, the ship was wrecked and all the paintings were lost"? I cannot explain it; but that Loten's collection of natural history paintings was *not* lost, at sea or on land, is demonstrated by the facts mentioned by Mr. van Houten, that, by a codicil to his will, dated 13th October 1778, he bequeathed the whole collection to the Dutch Society of Sciences at Haarlem, and that after his decease in 1789 this body took possession of them. I have read the clause in the codicil in question, and there can be no doubt in the matter. The paintings are there stated to be in " a flat copper box," which the testator requests to be placed inside a wooden case for the better preservation of the valuable contents. The action of the Haarlem Society of Sciences in parting with such a valuable gift is strange, but is not without parallel in the history of other public institutions. Its loss, however, has been Mr. van Houten's gain, and he is to be congratulated on his acquisition, which he evidently appreciates; while a debt of gratitude is due to him for collecting and publishing the interesting facts connected with these paintings set forth in his two papers.

D. F.

Memorandum by Mr. R. G. ANTHONISZ, Ceylon Government Archivist.

As a considerable portion of the paper relates to the personal history of two men who were closely associated with Ceylon, I have been at some pains to supplement from materials at hand here the information that has been afforded by it. I have thus, I believe, cleared away one or two doubtful points which Mr. Ferguson confesses to be unable to further elucidate, and to have corrected some trifling and pardonable errors.

---

* This is proved by the fact that the remarks quoted by Mr. van Houten occur on the drawings of the Tailor Bird and the (Little Horn ?) Owl, which form plates viii. and iii. in Pennant's *Indian Zoology.*

First, as regards the artist de Bevere, I have had no difficulty in identifying him as Peter de Bevere, son of David Willemsz de Bevere, an *assistant* in the Civil Service of the Dutch East India Company. The father, David Willemsz de Bevere, was born in Batavia, whence he appears to have come over to Ceylon some time previous to 2nd March 1721. On that date he married, at Colombo, for the first time, Christina de Kelcq, natural daughter of Willem de Kelcq (or Kelk), master sailmaker, by one Anna Coere, who, to judge from her name, must have been of Portuguese descent. The only issue of this marriage was the artist Pieter de Bevere, who was baptized at Colombo on the 20th September 1722, with the names Pieter Cornelis. David Willemsz de Bevere afterwards made a second marriage, by which he left several other children. The record of Pieter de Bevere's appointments in the Company's service is as follows :—

1743, appointed Assistant Land Surveyor on 10 guilders per month.

1748, advanced to 16 guilders.

1754, advanced to 24 guilders.

1757, advanced to 30 guilders.

All these promotions were in the usual order except the last, in which he obtains the status and the salary corresponding to that of a *Boekhouder* in the Civil Service before the expiration of his former bond, an indication, very probably, of the patronage he was under. It was in this last year that he is said to have accompanied Governor Loten to Batavia. I am sorry I have failed to get any further trace of him in the records; but sufficient presumptive evidence of his return to Ceylon is, I think, afforded by an old book which came into my possession accidentally some fifteen years ago. It contains studies in figure drawing from designs by the old Dutch artist Abraham Bloemart, and appears to have at one time been the property of Pieter de Bevere; because, inscribed in ink, in a neat and elegant handwriting, on several pages of the book, occur the words: "Van Pieter de Bevere, Batavia den 10 Maart 1758."* There is also a later endorsement: "Den

* "Belongs to Pieter de Bevere, Batavia, 10th March 1758."

Eersten April 1799 gekogt door J. C. Hollebeek."* This Hollebeek, it is known, was a resident at Galle about a hundred years ago. The presence of the book in Ceylon seems to me to be *primâ facie* proof of the fact that the artist had returned here and had brought the book with him; although, I admit, there is also room for other theories more remote, as, for instance, of its having come here with his effects after his death. The evidence afforded by this book is, however, not merely confined to the point I have referred to. It would seem to give us further glimpses into the life and occupation of the artist. As the studies in the book are all of the human figure in its various parts and aspects, they must have provided him with exercise in figure drawing and painting; and it is, I think, reasonable to suppose that his profession as an artist was not limited to the delineation of natural history objects, such as those he designed for his patron; but that he must also have devoted his time to drawing and painting the "human form divine." It is very probable that he was a portrait painter.

I come now to the subject of the grandfather—the Major de Bevere referred to by Governor Loten. That this was the Captain Willem Hendrik de Bevere who figured in Ceylon history in the first and second decades of the eighteenth century is, I think, more than probable. He might very well have been the father of David Willemsz (*i.e.*, Willem's son) de Bevere and have brought over his son with him from Batavia, as the particulars I have quoted from the Marriage Register are quite in agreement with this supposition and also with the ages which Loten assigns to his artist protégé and his father. That the father was born in Ceylon is, I think, clearly disproved, and when Governor Loten, in later years, possibly when in England, speaks of him as "a natural son of Major de Bevere *by a Cingalese or black Portuguese woman*," he is not quite correct. Major (or Captain) de Bevere had, as far as we know, never been in Ceylon before 1708, and his son, born in Batavia, could not have had a Cingalese or black Portuguese for his mother; although it is not impossible that the woman

* "On the 1st April, 1799, bought by J. C. Hollebeek."

was a native of the Malay Islands. When, again, Loten describes the artist as "the untaught Christian Cingalese" he is either positively wrong or he uses these words in a sense which requires some explanation. It must be remembered that Loten, though by this time sufficiently familiar with English to use it with freedom, must still have been ignorant of some of those nice distinctions which only a native or a lifelong student could be expected to know. By "untaught" he possibly meant "self-taught," and in calling Pieter de Bevere a "Cingalese," he most likely meant a Ceylonese, in the sense of one born in the Island. In the classification officially recognized in Ceylon during the Dutch rule he would, I think, have been rightly described as a *mixties.* To return to Captain Willem Hendrik de Bevere. The passage which Mr. Ferguson quotes from the *Beknopte Historie* undoubtedly refers to him. I find that on the 14th September 1708 he took his seat for the first time at the Political Council as Chief of the Military at Colombo, and occupied it till the 23rd January 1714. On the 9th September 1713 the Council unanimously elected him Ambassador to the Kandyan Court, and the Embassy soon after set out with the usual pomp and ceremony. Nothing untoward appears to have occurred in the journey upcountry. The conduct, both of the Ambassador and of his retinue, was everything to be desired, and the reception at Kandy was most gracious. But de Bevere is said to have taken umbrage at the quality of the return gifts which the King presented to the Embassy. He looked upon these as of too little value and unworthy his position and dignity. In the rancour created in his mind by this, which he looked upon as an insult and indignity, he appears to have behaved in a most rash, if not insane, manner. When, immediately after the audience with the King, the royal repast was served out according to the custom of the country, he would not so much as touch or taste any of the dishes which were presented to him, but, in the most offensive manner, ordered them to be given to his slaves to eat. And the royal gifts, which he was bound to convey with due ceremony, covering them with a white cloth, he treated with great disrespect and contempt by tying them up at the foot end of his palanquin. Nor did he

treat with any greater consideration the courtiers whom His Majesty appointed to accompany him on his return journey. These he insulted and abused, calling them scoundrels and rascals, and their priest, or *tangataar*, who was also in the company, he mocked and mimicked in the most irreverent manner. Not content with all this, he rushed after one of the *coraals* and some of the other chiefs, brandishing a cane, with which he threatened to flog and chastise them. The first intimation which the Governor and Council at Colombo received of these doings was from an ola dispatched by the Interpreter Mudaliyar, Don Paulo Dias Gunaretna, who accompanied the Embassy. The Council, full of concern as to the result which these rash proceedings of their accredited ambassador would have on the friendly relations then subsisting between the Court and the Dutch Government, decided to place de Bevere under arrest as soon as he should arrive at the capital, and also to forward to the Kandyan Court an ola dispatch tendering apologies. In the meantime de Bevere was deprived of his seat in Council and of his local command in the army, while it was decided to dispatch him to Batavia by the vessel then ready to sail, so that he might be dealt with for his conduct by the Supreme Government of India. Of the further history of Captain de Bevere the Ceylon records are, of course, silent.

Of Governor Loten's personal history very little beyond what has been stated could be gathered from the records. His residence in the Island was limited to five years, and the diaries for these years are unfortunately missing, while the Resolutions of the Political Council deal for the most part with purely official matters. With reference to Loten's son-in-law, Dirk Willem van der Bruggen, it may be mentioned that he not only accompanied the Governor to Ceylon in the *Giesenburg*, but served in Ceylon for about four years. On the same day that Governor Loten's letters patent were read in Council and he assumed the Government (30th September 1752), van der Bruggen was introduced to the Political Council and took his seat as a member of it. At the next meeting of Council, 9th October 1752, he submitted an application for a passage in the homeward-bound vessel for his son, Jacob

Willem van der Bruggen, evidently a son by a previous marriage. After March 1756 his name disappears from the records, and as his wife (Loten's daughter) died at Batavia on the 15th May 1756, it is most likely that about that time he accompanied her there.

I have examined the impaled arms on Mrs. Loten's tombstone at Wolvendaal church, and also the arms on that of Jonkheer François van Beaumont depicted on page 16 of *Lapidarium Zeylanicum.* The heraldic tinctures not being denoted on either of these stones by the conventional lines and dots used for the purpose, I presume Mr. van Houten obtained the tinctures he gives from some other source. The reproductions in the *Lap. Zeyl.* are not very accurate, but yet they cannot be said to be seriously at fault. The lion in the upper half of the sinister impalement on the Loten tombstone and in the arms of François van Beaumont certainly vary. There is an apparent inaccuracy in both cases, because in neither of them is the attitude of the animal in accordance with any prescribed heraldic form. Comparing the two and making allowance for the ignorance of the engraver, it would seem that either the lion rampant or the lion passant (not guardant) was intended. This is further proved by the crest over the latter shield, which should be properly described as a demi-lion rampant. I attach no importance to the variance in the form of the ship in the two van Beaumont shields. A certain amount of latitude is allowed in depicting from heraldic word blazons such charges as these, and the ship in both cases may be taken to represent the same charge. There being really no doubt that Mrs. Loten belonged to the same family as the young nobleman whose death is recorded in the tombstone on page 16 of *Lap. Zeyl.*, it would be interesting to know what relationship he bore to Cornelis van Beaumont, the father of Mrs. Loten. They appear to have been contemporaries.

There is only one other point upon which I should wish to touch, and that is, the reference to the Upper Merchant and Chief Administrator Noël Anthony Lebeck, with whom Governor Loten is said to have "experienced great difficulties." The Chief Administrator (Hoofd Administrateur), it may be mentioned, was the highest official next to the Governor at the

Council Board, that is, excepting the Commandeurs of Jaffna and Galle, who, when present, took precedence of all the other members. The strained relations between Loten and Lebeck would appear to have begun from the very moment of Loten's landing in Colombo. When the *Giesenburg* with the Governor on board arrived at the Colombo roads on the 30th September 1752, it is said that, upon Lebeck's proposal, the castle guns, instead of, in the first instance, opening the salute with the usual discharge, were made to await and to answer the salute fired from the ship. Again, Lebeck, it is stated, objected to the temporary suspension of the state mourning which was then worn for the late Prince of Orange, William IV., when this was suggested as a compliment to the incoming Governor. Whether in these matters he had acted in good faith or with the determined intention of offering a slight to the Governor, it is clear that Loten was not a little put out by the circumstance. What private explanations or recriminations passed between the Governor and the Hoofd Administrateur do not appear, but that a good deal of rancour existed between them throughout their intercourse with each other is abundantly manifest. Yet the smouldering fire did not burst forth till nearly four years had gone by. Accumulated charges were then brought against Lebeck, among which may be mentioned (1) the failure to forward rice to Trincomalee, where it was urgently wanted for the garrison and the establishment, (2) not having the cinnamon intended for export properly packed in bags, (3) the excessive expenditure of 1,000 guilders in the repairs of the Rotterdam Bastion of the Colombo fortifications, and (4) the taking of every opportunity to wilfully mislead the Governor, whereby he was led to commit several errors of administration. Lebeck, who appears to have considered himself very much ill-used, and who looked upon the action taken against him in the light of a persecution, showed anything but a submissive spirit under these proceedings. When pressed very hard in the Council on one occasion he burst forth with the words: "I shall now risk everything, yea, everything, even if it be my life."* When charged by the

* "Nu sal ik er alles aanwaagen, ja ik sal er alles al wat het myn leven aanwaagen."

Governor with having written against him to the Government of India, he retorted: "Yes, I wrote concerning you last year to Batavia and also to the fatherland, and I shall do so again. You may be sure I will not lie still;"* and he added, "I have had much greater enemies than you from whom I have escaped, and, mark you, I shall with God's help resist you also and get off free."† On the 26th April 1756 the Council, on the proposition of the Governor, suspended him from office, when he put in the following protest: "I protest against this temporary suspension from office in the most respectful manner, chiefly on the ground that I have not yet replied to all the charges brought against me by His Excellency, nor have I been heard thereon. I request also that copies of the written charges brought against me may be furnished to me, with all the papers relating thereto placed on the table this day, and that this protest may be duly entered in the proceedings." The matter eventually went before the Council of India, and although I have not been able to trace any record of the fiat pronounced in the case by the Supreme Government of India, there is no doubt that, as a consequence of his spirited conduct, Lebeck was, for several years, superseded by Abraham Samlant as Hoofd Administrateur, and it was only on Anthony Mooyaart's retirement from the Commandeurship of Jaffnapatam in 1767 that he regained the seniority which he appears to have temporarily lost.

22nd February 1907. R. G. Anthonisz.

---

* "Ja, ik heb voorleden jaar over u geschreven na Batavia en ook na 't Vaderland, en ik zal het nu weder doen, u kund verzekerd zyn dat ik niet stil zit."

† "Ik heb zoo veel groter vyanden gehad waar van ik my wel verlost. zie, en zal het N. B. door Gods hulp tegens u ook wel houden en my redden."

Memorandum by Mr. F. H. DE VOS, Advocate.

Johan Gideon Loten.

I take the following from Mr. R. P. van den Bosch's list* of persons who held office in Ceylon under the Dutch :—

"1754, 30th September. Johan Gideon Loten,† born in Utrecht 16th May 1710, son of Mr. Jan Carel Loten, *Secretaris van den Lekkendyk, benedendams*, died 1st December 1763, and Maria Aartsen van Juchem. Johan Gideon Loten was married,‡ 25th August 1733, to Anna Henrietta van Beaumont, daughter of Cornelis van Beaumont, died 1724, Independent Fiscal of the Cape of Good Hope, and Deliana Blesius.§ Anna Henrietta van Beaumont was born in the Cape of Good Hope on the 15th November 1716, and died in Colombo on the 10th August 1755.

"Johan Gideon Loten married, (2) in Banstead in Surrey, 4th July 1765, Letitia Cotes, daughter of Digby Cotes and Elizabeth Bannister, and died in Utrecht, 25th February 1789. The following is an extract from the Burial Register :—

"'Overleden op 25 Februari 1789 en begraven in de Jacobikerk : Del Wel Ed. G. Heer Mr. Johan Gideon Loten, op den Drift bij de witte vrouwenburg, laat na zyn vrouw, maar geen kinderen. Gezonken f. 250 en op den 2en May 1791 het wapen opgehangen.'........

"We also have come across the name of Joseph Loten, 1709–10, *Fiscal Independent*, who in the year 1721 returned to Holland with a return fleet of 34 ships and (a cargo) worth more than ten million guilders (Val. I. v. p. 177).

"He is also mentioned as Loten *Heer van Bunnik en Vechten, Witte Vrouwen en Astede, mitsgaders Kanunnik ten Capitelle van den Dom.* He was the uncle of Joan Gideon Loten......

"Joan Gideon Loten, born in Utrecht, is mentioned as a student in the Academy of Utrecht Ao. 1776........

---

* 1 *Wapenheraut* 77.

† Journal, R.A.S., C.B., vol. XV., No. 49, p. 235; vol. XVII., No 52, pp. 16, 18.

‡ At Batavia, 24th August 1733.

§ Journal, R.A.S., C.B., vol. XVIII., No. 56, p. 327.

"In the first volume of a copy of Valentyn's work on the East Indies, which was published at Dordrecht, 1724–26, there is the following note on the front sheet :—

" ' Dit werk is vermoedelyk in het bezit geweest van den Heer Joan Gideon Loten in 1754 Gouverneur en Directeur van Ceylon (zie de *eigenhandige* aanteekening op page 320 van het IIIe Dl). This book I bought in 1735 or 1736 at Samarang on the East Coast of Java; it was with me at Batavia, Macassar, Ceylon, Cape the Good Hope, Utrecht, and Londen, also at St. Helene. I bought it of Benjamin Blom and as I remember pd. st. at the rate of about f. 150, certainly dear enough.' "........

The above does not perhaps add much to what is contained in Mr. Ferguson's paper and Mr. Anthonisz's memorandum.

I have not been able to discover the grandparents of Governor Loten. According to Mr. van Houten there lived at Utrecht in 1756 a brother of the Governor by name Arnoud, who was burgomaster of Utrecht and died there in 1801. This must have been the Arnoud Loten * who was married to Lucretia Christina Scheffer and had by her Mr. Joan Gideon Loten † (the Governor's namesake), born 23rd September 1755, died 10th January 1809, married at Utrecht, 29th May 1797, Henrietta Wilhelmina van den Heuvel, born in Utrecht, 14th January 1769, died in Bonn, 1st June 1829. As regards Joseph Loten ‡ the following is an extract from the Marriage Register, Batavia :—

" 13 Juli 1720.

" Joseph Loten van Amsterdam laatst geweest zijnde independent fiscaal in de directie van Bengale weduwnaar van Alberta Pierraerd van Batavia met Abigael Tant van Batavia weduwe van de Edele Joan van der Nipoort, oud-secretaris van de Hooge Regeering van India."

He must therefore have returned to the fatherland a year after his marriage.

---

* *Aanzienlyke Familien*, Vorsteman van Oyen, vol. II., p. 60.

† Student in the Academy of Utrecht.

‡ *De Nederlandsche Leeuw*, vol. xxiii., p 286.

Dirk Willem van der Bruggen (Brugge, Brugghen).

The following is an extract from the Marriage Register, Batavia :—

" 19 Juli 1752.

" Dirk Willem van der Brugghen van Bergen-op-zoom, opperkoopman, weduwnaar van Christina Engeltina Rebbens met Arnoldina Deliana Cornelia Loten van Semarang."

The children * of these parties born in Ceylon were the following :—

1. Jan Carel Gideon van der Brugge (Brugghen), baptized at Colombo, 15th April 1753.

2. Albert Anthony Cornelis van der Brugge (Brugghen), baptized at Colombo, 31st March 1754, died at Colombo, 30th July 1755.

3. Anna Henrietta van der Brugge (Brugghen), baptized at Colombo, 20th April 1755.

According to Mr. van Houten the brother and sister of Albert Anthony Cornelis van der Brugghen predeceased the latter.

Cornelius van Beaumont.

† *Cornelius van Beaumont* of Breda, *onderkoopman* and *dispencier*, Colombo, 1712, Fiscal of the Cape, 1713–24, was married to Deliana Blesius, daughter of Johannes Blesius and Christina Diemer. He had by her :—

1. Catharina Balthazarina, baptized 7th October 1714;
2. Anna Henrietta, baptized 22nd November 1716;
3. Christina Jacoba, baptized 21st August 1718;
4. Cornelis Johan, baptized 18th February 1720;
5. Elizabeth Arondina, baptized 2nd March 1721;
6. Deliana Isabella, baptized 5th July 1722;

All born in the Cape.

His eldest daughter, Anna Henrietta, was baptized in Colombo on 9th October 1712, and must have died young.

---

* 52 *Navorscher* 130. † 2 *Wapenheraut* 6.

Johannes Blesius of Breukelen, married, 22nd April 1685, Christina Diemer, and had by her :—

1. Gysberta Johanna, baptized in the Cape, 23rd June 1686, married Governor Rumpf.*

2. Christina, baptized in the Cape, 24th September 1690, married Jacobus Cruse.†

3. Deliana, baptized in the Cape, 29th November 1693.

Pieter de Bevere.

I agree with Mr. Anthonisz that Pieter de Bevere was the son of David Willemsz de Bevere and Christina de Kelcq, but I do not know where Mr. Anthonisz got the information that Christina was the natural daughter of Willem de Kelcq, master sailmaker, and Anna Coere. Willem Jansz de Kelcq, of Dordrecht, sailmaker, was married in Colombo, 3rd September 1690, to Dominga Harmensz, of Colombo. From a woman called Maria Lucas he (de Kelcq) had an illegitimate daughter, Wilhelmina, baptized in Colombo, 3rd May 1711. Dominga Harmensz was perhaps the daughter of Hendrik Harmensz of Norden, a brazier in Colombo in 1669, thereafter a *vrijburger*, by his wife Dona Dominga. In the catalogue referred to by Mr. Ferguson at the commencement of his paper de Bevere is called a *sieur*, which I think has a peculiar significance. It means that he held the rank of a boekhouder. Valentyn ‡ says : " De onderkoopman, die als *seur* of boekhouder van ons schip medevoer, was Jakobus Valentyn, enz."

This confirms Mr. Anthonisz's statement regarding the status of de Bevere in 1757. Governor Loten's statement that Major de Bevere " was of the most noble and ancient family of de Bevere " I think requires confirmation. Vorsteman van Oyen § makes no reference to him.

---

* Journal, R.A.S., C.B., vol. XVIII., No. 56, p. 326. She married (as widow Rumpf) in Batavia, 16th March 1726, Mr. Everhard Kray-vanger of Macassar, Advocate Fiscal of India, widower of Maria Catharina de Vos (24 *Nederlandsche Leeuw* 24).

† Journal, R.A.S., C.B., vol. XVIII., No. 56, p. 327.

‡ *Van en naar Indie*, by A. W. Stellwagen, p. 126.

§ *Aanzienlyke Familien* (de Beveren).

Pieter Cornelis Hasselaar.

Pieter Cornelis Hasselaar, Burgomaster of Amsterdam,* thereafter Resident, Cheribon, born at Batavia, 24th March 1720, was the son of Cornelis Hasselaar of Enkhuyzen, Director-General of the Dutch Indies, by his third wife Gertruida Contantia Clement. Pieter Cornelis Hasselaar married (2) Gertruida Margarita Mossel, of Negapatam, the daughter of the Governor-General Mossel. The issue of this marriage was Adriana Hasselaar, born in the Indies, 4th July 1795, married in 1780 Jacob Antony de Roth, born Surat, 1753, the son of Johan de Roth and Susanna Anthonia van der Bruggen. So that in 1780 Pieter Cornelis Hasselaar's son-in-law was the son of (perhaps) the sister of Dirk Willem van der Brugghen, Loten's son-in-law. This is the only possible connection I can see of the Governor with the Hasselaar family.

The Arms of Loten and van Beaumont.

The arms on the tomb of Governor Loten's wife are the impaled arms † of Loten and van Beaumont, the blazons of which I have taken from Rietstap's *Armorial Général* (2nd ed.).

The close resemblance between the arms of François van Beaumont and Anna Henrietta van Beaumont shows that they were, beyond a doubt, of the same family.

3. Mr. GERARD JOSEPH then read the following note from Mr. A. E. Buultjens, bearing on the subject, prepared from certain Dutch manuscripts in his possession which he purchased at the Hague on one of his visits there :—

NOTE BY MR. A. E. BUULTJENS, B.A.

I have in my possession the Memoir on Ceylon of Governor Loten, and as both Mr. van Houten and Mr. Anthonisz state that "all trace of other Papers of Loten has, alas, since been lost," and "the diaries for the five years of Loten's rule in Ceylon are unfortunately lost," I hasten to give (as I received the proof of Mr. Ferguson's paper only yesterday, and the meeting is for the day after to-morrow) only an outline of the manuscript.

The Dutch manuscript in my possession consists of seventy folio pages of contemporary writing in a fair state of preservation. I purchased the manuscript, with some others, from the same

* 52 *Navorscher* 240: "un charmant vieillard (1787), la santé et le contentement personifiés" (Mevr. van Hogendorp).

† Journal, R.A.S., vol. XV., No. 49, pp. 229, 235.

well-known Nijhoff of the Hague from whom Mr. van Houten bought his collection of drawings, in one of my trips to Holland in 1885 or 1886. The title of the Memoir is " Memorie raekende Ceylon door den afgaanden Gouverneur Joan Gideon Loten aan den aan Komenden Gouverneur Jan Schreuder, nagaleten, gedateert Colombo, 28 Feb., 1757, geinsereert in het 2nd Ceylon's Briefboek, 1758, p. 202.

(Memoir on Ceylon left by the outgoing Governor Joan Gideon Loten to the incoming Governor Jan Schreuder, dated Colombo, February 28, 1757, inserted in the 2nd Ceylon Letterbook 1758, page 202.)

I may at once say that though several officials' names are mentioned, no mention is made of De Bevere or Lebeck. However, some light is thrown upon the work of Land Surveyors in Ceylon in 1743–1757, which is interesting, as the artist De Bevere was a Land Surveyor. I may here mention that Dutch surveyors' plans were coloured, and far more works of art than modern slipshod surveys ; and from two such plans in my possession I can fancy that De Bevere must have had a training in drawing before he qualified to become a Land Surveyor.

The contents of the Memoir are—

Section I.

The Company should remain in harmony with the Prince of the Land.

Chaper I.

The King's birth and marriage.

The Dessaves and Adigaars.

Relations with the Kandyan Court *re* Kaymel and Chilaw banks.

Siamese embassy.

Chapter II.

Of the Princes and their rule on the coast of India and the Maldives.

Madura, Tinnevelly, Tutucorin, &c.

The Maldivian Sultan, cowries, embassy.

Section II.

Administration of possessions and subjects.

Chapter I.

Functions of Dessave, Land Raad, the Tombo or Land and Garden Description.

As De Bevere was Land Surveyor, 1743–1757, I translate a part of this chapter, and it may well be imagined that De Bevere had ample scope for study of birds from nature during his surveys.

The Land Description was begun in Colombo in 1743 [the year that the artist De Bevere was appointed Land Surveyor], and now, says Loten (in 1757), " the Register of Lands and Men of the Hina, Raygam, Alutkoer, Hewagam, and Happitigam Korles has been completed.

"The Tombo at Galle was begun in 1741, and the Four Gravets and the Talpe Pattu have been completed; since then in the past year (1756) a beginning has been made with the Gangeboda Pattu, a great part of which, together with the Wellabodda Pattu and the whole of Wallalawitte Corle, still remains to be completed.

"The Tombo at Matara was begun in 1740, and during this time the whole of the Morawak Korle has been completed, and in course of completion are the Mature, Four Gravets, Weligama, Weligam Korle, Girreway Pattu, as well as the Wellabodda, Gangebodda, and Kandeboda Pattus, Dondra, the Baaygams, Cattoene, Oedabokke.

"Now, in order that the Land Description may be brought to perfection, everything depends, says Heer van Gollensee [a previous Dutch Governor] on an accurate survey, and this has been already accomplished so far that the gardens and fields of the village Attidie in Salpiti Korle, Kosgama in Hewagam Korle, Billem [Bellana ?] in Pasdun Korle, Raygam, Kelanie, and Paloum in Hina Corle have been surveyed by the Sworn Surveyors, and charts and registers thereof have been made." Here Loten points out the necessary connection between the Land Description in the Tombo and the Surveys, so that the possessions of each man may be accurately described, and by the surveys and charts it can be immediately discovered whether encroachments have been made, and so that the surveys and the charts made from them shall agree with the description of the land. More on this subject may be read from the report just sent in on February 3, 1757, by the Sworn Land Surveyor, together with the compendiums referred to there, the charts, registers, &c.

Chapter II.

Of the lands and the income from them.

It is here noted that the revenue fell owing to plague depopulating the country (and Loten suggests measures as taken in Java, Macassar, &c.), and a terrific storm or hurricane in May, 1755, which uprooted a considerable number of trees.

Chapter III.

The Inhabitants, their Chiefs, duties and accomodescans.

Six folio pages here describe the different castes and the services by each.

SECTION III.

Revenue from the land.

Chapter I.

Trade.
Linen from Madura.
The Fanam Mint.
Arecanuts, chanks, salt, elephants, &c.

Chapter II.

The Income.
Revenue fell.

Chapter III.

The Products of the Land.

Cinnamon and disorders of the Chalias. About the conservation of the cinnamon trees more may be seen from the report of the Dessave Cramer and the annexures of the officer of the Mahabedde Leembruggen dated April 24, 1756, as well as that of the Sworn Land Surveyor of February 3, 1757. [This last may well be De Bevere, who was then at the head of his class.]

Abraham Samlant [who superseded Lebeck] is here mentioned as being Upper Merchant and Chief Administrator.

The Ceylon cardamom.	The pearl reefs (4 pages folio).
Pepper cultivation	The blood coral.
Coffee cultivation.	Maldivian cowries.

Section IV.

Internal affairs.

Religion:

Jansz and De Melho (Jaffna).
De Silva (Trincomale).
Bronsveld, Sybrands, Meyer (qualifying at the Seminary).
Wirlmelskircher (Rector of School).
Potken, Smith, Schultze (Predikants at Colombo and Galle).
The printing press: catalogue of printed books.
The Courts of Justice.
The fortifications and artillery.
The Navy.
Income and expenditure.

4. His Excellency the Governor: Does any gentleman wish to speak on the papers which have just been delivered? If there is no discussion I would ask the President to read a paper on "Prehistoric Man and Stone Implements in Ceylon."

5. The President (Mr. Ferguson) introduced Mr. Pole's paper by saying: I am not a geologist, and indeed know very little on the subject of the stone age and prehistoric remains. But one of the greatest authorities in India, Mr. Bruce Foote, F.G.S., has been in communication with Mr. Pole, and has expressed great interest in his work as a collector. I am not sure that he has seen more than diagrams from Mr. Pole as yet; but we have the fact that the Drs. Sarasin so prized Mr. Pole's first collection of stone implements that they asked him to take them to Europe. Fortunately Mr. Pole was able to duplicate the collection, and he has favoured us with a series of specimens and certain notes on the same. I think it was before he left the East that Lord Curzon related how a friend of his examined the arrows in the quiver of a native hunter in India. He found that the first arrow was tipped with stone of the neolithic age, but that the next was tipped with electric telegraph wire—a theft from the 20th century. There is no case here of such modern application, but Mr. Bruce Foote, judging by the diagrams, says the collection shows a type of "flake production," quite distinct from that hitherto met with in Southern and Western India. I will now read from the notes :—

A FEW REMARKS ON PREHISTORIC STONES IN CEYLON.

By JOHN POLE.

THE Drs. Sarasin of Basle, who had visited our Island on several occasions previously, in April last determined stones of the character shown to you this evening to be prehistoric flakes of the Palæolithic age and of Vẹddaic origin. These gentlemen found similar flakes in the Vẹddá caves of Nilgala and elsewhere in Úva.

This therefore is our starting point. Flakes from all parts of the Island—Puttaḷam, Hambantoṭa, Mátalé, Náwalapiṭiya, Dimbula, Dikoya, and Maskeliya—have been found of a similar nature; the deduction is that they were made by the prehistoric Vẹddás, and that they are of Palæolithic age.

Iron was introduced, seemingly, when the Dravidian invasion occurred about 2,600 years ago. These stones may therefore be reckoned at any number of years older, or, to allow for the distribution of iron, so many years less in age.

They seem to be of common occurrence throughout the Island, and fairly abundant; the real wonder being that they were not discovered earlier.

There may be amongst them many that show no signs of having been used, and, to our perceptions, there lies a great difficulty in believing that they could be made of use by any man; but they have been found in good society, alongside of many that possess the signs, and they tell us something of this small-handed retiring race.

Unfortunately their utter crudity and almost shapelessness of design throughout this whole series affords great scope for controversy. The simplicity of the implements can only be appreciated by those who can realize the degraded state of the beings who devised them.

Even in the case of some of the latest found slate, shell, and flint implements of the Neolithic age, in Cornwall, a prejudice existed in the minds of many as to their nature, chiefly on

account of their want of workmanship, it being urged that they were merely pieces of sea-washed rubble. "No such implements were to be found on the beach, however," and I am afraid this is the only point we can bring forward in favour of the chips (No. 14), for none of these flakes of "shaken" quartz are to be found except in the general camping grounds on our mountain ridges.

The Vẹddás are a small-handed race, the Drs. Sarasin tell us, and these stones appear to give us the same information of the prehistoric. We merely surmise the uses they were put to: the peeling of the arrow-wands, and scraping of the bow into shape, and shafts of spear or javelin, the skinning of the slain animal, and dressing of the skins for raiment, manufacture of bags for porterage of their stone implements, &c. Beyond this there was no "necessity." "They ate, they drank, and slept, and then, they ate, they drank, and slept again"; but I suspect, from the nature of their artillery, that hunting entertained them not a little.

Almost without exception these stones have been collected since the Drs. Sarasin made their interesting discovery; their existence, of course, was known to me some time previously. All stones collected and preserved, previous to their letter in the *Observer* of April 19 this year, about 100 in all, fair examples, have been forwarded to the Drs. Sarasin. These will be described and probably illustrated in the book the Doctors are writing on this subject.

The main features of interest in these specimens lie in the circumstance that the Doctors recognized the nature of the stones which had been forwarded to them in Kandy as being very similar in style to those forming their Uva discoveries.

An attempt has been made to place this lot in some sort of arrangement to allow of their exhibition, by showing the nature of the crystals from which most of their keenest implements were struck, (1) showing their rough water-worn exterior; and (1*a*) flakes showing the outer skin of such crystals on their surface. These are marked No. 1 and No. 1*a*.

The crystal marked No. 1 has had a chip taken off, probably by a Vẹddá, as a commencement; this shows nicely the internal nature of the stone.

No. 2 gives us an idea of the delicate colouring of some of the crystals they employed, and with them are shown "cores" of various crystals found on their encampments.

No. 3 I presume are "arrow-heads": these were picked up in various parts of the district, with the exception of a few which were evidently spoilt in the manufacture; these were found in the society of other "flakes" and "chips" in their camping grounds. "Worked stones" from this clear quartz are represented (*a*) by "flakes" which have been smashed away "usefully"; (*b*) by pointed or sagittiform or spathulate stones showing undoubtedly the two "business edges" somewhat sharpened for or blunted by work. "Arrow-heads," we must surmise, may have been of any outline, the unit of value being the keenness of the edge; and of any size, the character of the quarry determining this; and we may suspect that no good point was lost sight of; probably the edge of the appetite kept the edge of the flake keener, or was it the reverse?

No. 4 shows some arrow-heads wanting the "other half"; these we might reasonably presume were spoilt in the working. Theory ever demands some imagination, and without this there must exist much doubt and lack of faith in any collection of this nature.

No. 5 is interesting as demonstrating how the upper angle of a four-sided stone was removed to form a good "point."

No. 6, glass-like flakes: these occur in great quantities, and represent, I believe, their most cherished ideals for tools; on account of the keenness of the edge of the material, probably these only were used as knives. One of these flakes has an interesting human profile, and one is precisely similar to a flake from a salt-cellar. I believe it to be of stone, and to have been a favourite implement at one time. The edges have been much worn by use. There are other flakes quite as clear, and the marks of the fracture, even under a powerful lens, appear precisely similar.

No. 7. Flakes of a coarser nature showing signs of work on the edges.

No. 8. Flakes discoloured by acids or iron stains found on one part of the same field.

No. 9. Some unworked flakes and chips from the prehistoric camps.

No. 10. One set of chips taken from one camping spot on Deeside estate.

No. 11. One set of chips taken from one camping spot on Scarborough estate.

It is much to be regretted that two or three years previous to this exhibit being prepared, all good and likely " flakes " had been removed from the vicinity and are now in the collection forwarded to the Drs. Sarasin. They might have made Nos. 10 and 11 more interesting.

No. 12. Three crystals, which may represent boring tools, one of which has apparently been used as such ; one seems to have been used until the point broke ; the third crystal, I believe, has never been in use.

No. 13. One crystal which may have been used as a chisel, as both ends seem to have been at work.

No. 14. One lot of crystals of an entirely different nature, probably of the former age ; a softer stone must have been made use of previous to the discovery of the crystal quartz. The form appears of older type, and the intention can be seen clearly in three or four of the specimens. The stone is rare in Maskeliya, and very few examples of this nature have been found as yet.

The (?) Eotithic Age.

No. 14. A few words on these stones. There remains much of great interest to be worked out, chiefly in discovering, if possible, some implement which extends a probability of an earlier manufacture.

With a knowledge of the present-age Veddá, and these prehistoric flakes before us, it is extremely difficult to imagine anything more crude and simple. We must therefore theorize on the material : Had these people always made use of vitreous crystals ? The answer is plainly " No " ! There was a time when a softer stone was known which answered all of their purposes fairly well ; the rock they made use of was of a commoner and coarser nature, and much softer.

The vitreous crystal was the greatest discovery of this (?) Eolithic age, whose flakes and implements were of the nature

of those shown in No. 14. This is pure conjecture, but the suggestion is made, not alone for the value of the idea, but because the material of No. 14 is so decidedly different from the vitreous flakes, and that the forms are so peculiar. The stones are much less frequently met with. At the same time we are aware that in those districts where this rock is common it is possible that these flakes may be also of common occurrence. This we have to discover.

On reading this to a friend who was much interested in the subject he remarked that it was a pity a little more was not written. My only apology must be that very little more should be written, pending the issue of the Drs. Sarasins' book; they will probably give us something not merely conjecture, which anything written at this date must surely be.

Like most men of some experience in life, I have formed opinions regarding the great changes in the past; but I have no wish to force these views upon others. What is offered, diffidently, is a general, and it is hoped, a not altogether uninteresting selection of ideas, which may at some future time assume shape, and form some foundation for a wider knowledge of these ancients.

NOTES ON THE SECOND SELECTION.

N.B.—I have endeavoured to forward in this, my last lot of prehistoric stones, none but those which show undoubted signs of the hand of man. To all who have become acquainted with the beautifully worked "flints" with which we were so familiar in our school days, these "attempts" must present a great surprise. The stone is not so workable as the English flint, though really of the same nature. Flint is composed of silica in a purer state perhaps than the coloured crystals of the East.

Our stones do not seem to lend themselves to "flaking" so well, and really must have exercised the patience of the aborigines, sometimes far beyond usual limits, for rough and apparently unworked as they seem it is difficult at this present day with the present age tools to obtain a flake as desired.

The crystals seem to conform to no special rule. Some of the purest nature have a fracture similar to the " engine turning " on a watch. There are in my possession stones of a very much earlier age—still Palæoliths.* They are composed of a material that lends the extreme of uncouthness to these weapons. I arrive at their earlier date from this circumstance alone, for I cannot imagine a " hunter " once making use of such stone, after the discovery of the valuable " vitreous " variety of quartz (or crystals).

Box marked No. 1*a* contains two arrow-heads (weapons). The specimen numbered 33 is a very good instance of rough workmanship ; and it is extremely difficult to imagine how this implement was " insinuated " except by excessive force—the negotiating point, probably lost, could hardly help this much forward, and yet there are signs of much work expended on it.

The specimen marked 43 is an ordinary surface flake with the corners knocked off—a much more serviceable weapon ; and after a view of No. 33 one can imagine the joy of the prehistoric who secured it. These two stones show such a wide difference in their nature that they fairly mark the extremes in the use of the material obtainable.

Box marked No. 2*a* contains 14 arrow-heads (weapons), of which Nos. 36 and 37 were either spoilt in manufacture, or spoilt on contact with a bone. I think the artizan was to blame, for they were found on the some spot. The remaining implements are of the usual " diverse forms " found up-country.

Box No. 3*a* are forms of what I surmise are of older origin, judging from the nature of the material. Eoliths are far more likely to be found in the Northern Provinces, for, if the aborigines entered the Island from the North and gradually passed South and East, the inference is that their vestiges in the Northern Provinces would be of an earlier date. It is quite possible that they entered the Island during the Palæolithic age. Therefore any flakes from the northern parts of the Island should be of special interest.

---

* These stones have suffered from the " weathering," and seem to retain the outline only of the intended weapon. I think the correct term for these stones should be " implements." We can only guess at the purposes for which they were intended and used.

Box No. 4*a* merely demonstrates that our prehistorics made use of more than one kind of quartz.

Box No. 5*a* contains some " flakes " of great beauty: one or two of them seem to tell us that they have been made of use from the appearance of the edges. The large flake shows no sign of having been used. They suggest " cutting " implements, and many retain the outer skin of the water-worn crystal.

Box No. 6*a* has simply some chips found on one spot, the camping ground, where the stones were manufactured. The rough triangular, or heart-shaped stones, in this collection, may be called arrow-heads for the sake of discrimination, for they were probably used as such, but they give one no idea of an arrow-head such as we understand it.

In the box 1*a* are two forms which are the nearest to that which is understood by the word " Sagittate." These two stones are interesting examples of " accidental " formation. They became of shape, adapted to a point at the first blow from the rock. No. 33 may have been shaped " slightly "— you may see that " they " were afraid of taking off too much from fear of losing its use altogether; and some very rough projections remain; but No. 43 is the result of one stone " bumping " against another, a pure surface flake, with a portion of the coating of the crystal proving this. Probably this has never been used; the base on one side of the " bulb of percussion " has been knocked away, and possibly three blows of the maker finished the weapon.

NOTE BY MR. R. BRUCE FOOTE.

The subject Mr. Pole treats of is one of great scientific interest to all true archæologists. The publication of his paper will certainly do good in drawing attention to the subject of the ancient stone implements found in Ceylon, no matter by what names they be called, or to what age they be assigned.

Mr. Pole is evidently an enthusiast on the subject of the old implements, and will I hope meet with much sympathy in his researches. He has very kindly sent me a number of specimens for inspection, and offers me some of them. I have not yet had time to go through his " finds," being myself very busy at the Madras Museum arranging the large collection I transferred there. Some of Mr. Pole's specimens I glanced at are certainly genuine artifacts. Ere long I hope to unpack them and compare them with some Indian specimens.

6. His Excellency the Governor: Does any gentleman wish to speak on the Paper just read and the notes thereon ?

There was no discussion.

7. His Excellency the Governor: It only remains for me to propose on your behalf a cordial vote of thanks to the two gentlemen who have given this Society such interesting Papers as we have listened to this evening. The first Paper especially, though long, is of particular interest to this Society, considering that the Society has taken such an interest in the Natural History section of this Museum. The Paper in itself shows a remarkable amount of research. This we quite expect from Mr. Donald Ferguson, who, I understand, is a wonderful authority on Dutch Records. Mr. Anthonisz himself you have heard read his portion of the Paper, and he also is a gentleman to whom the Members of this Society always listen with the greatest attention, and who always interests them in the valuable matter he brings forward to their notice. I am sure we all much regret, as Mr. Ferguson has explained in his Paper, that such a valuable collection of paintings has been lost to this Museum. The Paper in itself is, as I say, a most interesting one, and it may be divided into a consideration, if I may so express it, of the employer and the employed. The matter of the employer rather strikes me personally as coming to the Island and only here a couple of months, because it shows me that a Governor a century and a half ago had a great deal more time at his disposal than a Governor has now. As regards myself, much as I should wish to do so—and ignorant as I am on matters connected with Oriental study—I feel that it would be impossible for a Governor now-a-days to devote such time as Governor Loten did to the study of natural history and architectural antiquities, and also to write a long series of notes such as is referred to on page 227 in the lectures we have just heard delivered. What is particularly interesting is that this Dutch Governor, who had rendered such excellent service and such varied service, ultimately settled in England, and devoted himself to the study of zoology and botany ; and it was in connection with the ability he displayed in these subjects he attained the high honour of being made a Fellow of the Royal Society.

As regards the artist himself, I think all are agreed he was not only a heaven-born genius, but also that it simply shows—he was three-fourths or four-fifths Ceylonese, I forget which—what an enormous power of conception of the artistic there is inherent in the native races, which we see not only by the exhibition of Mr. de Bevere, but also in other exhibitions of art, both in India and in this Colony.

As regards the Paper written by Mr. John Pole, I confess I am out of my depth; but I feel sure the specimens are extremely interesting, and we feel deeply grateful to Mr. Pole for his further offer that when his colleague visits this Colony next year he will place at the disposal of the Society additional specimens even more interesting than those placed before the Society this evening.

With these few words, as it is getting very late, I wish on your behalf to propose a vote of thanks to the gentlemen who have afforded us such an interesting and pleasant evening.

8. The PRESIDENT: Ladies and Gentlemen, it is my duty and great pleasure to move on your behalf a most cordial vote of thanks to His Excellency the Governor, as Patron of this Society, for his kindness in coming here this evening to preside over our meeting. Everyone acquainted with official routine must know how much pressed with important business the Governor must be so soon after his assumption of office and especially at this time of year, when all the heavy expenditure for next year is being arranged. We are, therefore, specially indebted to His Excellency for so readily agreeing to come to us, and our most hearty thanks are due.

9. Mr. J. PIERIS: I have very much pleasure in seconding the vote of thanks proposed to His Excellency for presiding here this evening. As Mr. Ferguson has already told you, it is a matter of great gratification to see His Excellency taking such an early opportunity of showing his interest in this Society, which is an ancient and a very important Society in the Island. His Excellency very truly told us that he could not afford the time to write notes on natural history, but I am sure His Excellency, in the many things he will have to look after in the administration of this Colony, will find time to come to the Society's meetings to hear the interesting Papers read, especially on matters which throw some light on the administration of Ceylon. The notes read by Mr. Buultjens show His Excellency that there are subjects to be found in the Journals of the Society which will assist him greatly in the work of modern administration. With these few remarks, I beg heartily to second the vote of thanks proposed by the President.

10. HIS EXCELLENCY THE GOVERNOR, in acknowledging the vote of thanks, said: I must thank the proposer and seconder very much indeed for the kind words in which they have proposed this vote of thanks to the Chair, and I must also thank you, ladies and gentlemen, for the way in which you have received their remarks. I can only say that during my period of administration here it will give me not only great pleasure, but even more than pleasure—it will give me much gratification to do all I possibly can to further the interests of the Asiatic Society. I notice that my predecessor did not come to a Meeting for about a year after his arrival in the Colony. He wished to familiarize himself with all that is of interest that is to be found in the Island and of which this Society takes so much care and notice. I, on the other hand, think it better to at once throw myself on your mercy and acknowledge myself as perfectly ignorant. I have been looking at the Index of proceedings of this Society and all the Papers which have been read for a large number of years past, and I assure you I am appalled at the mass of ignorance I have in these matters appertaining to Oriental studies, and I think it is better to take the

advice given to me to-night by Mr. James Pieris to attend the meetings of the Society here and begin to learn and be a humble disciple. In doing that I will not place myself in a worse position than did the Governor when the Society was first founded in 1845, and when the Governor of the day became the first President and Patron of this Society. At the same time I have considerable hesitation in occupying the Chair at your meetings, seeing what distinguished predecessors I have had before me. I refer especially to Sir William Gregory. I refer also to Sir Arthur Gordon, now Lord Stanmore, who was a most active Member of the Society, and gave them the benefit of a very large amount of knowledge. My immediate predecessor also took the greatest interest in the archæology of this Island, and did in the same way as I hope to do, even if I have not the fund of knowledge my predecessors have possessed, assist the Society. I cannot help feeling that one has a grand opportunity in a Colony of this sort of picking up knowledge which is interesting in itself, but most valuable in keeping the present in touch with the past. When I read books like Emerson Tennent's Ceylon and Cave's Buried Cities one feels how small one is in the presence of past great civilizations, such as those that were on this Island. When you think of the cities of Anuradhapura, towns of enormous size with teeming populations, their works of irrigation and remains of art, one has a field of study —if, as I say, a wretched Governor can find time to study—which will be most interesting and profitable for him. The Buddhist remains in this Island are very wonderful, and it was only two days ago I stood in this Museum talking of them with His Majesty the King of Siam. He then said to me: " But the worst of it is you have all the remains of Buddhism, but they are all in pieces. You ought to come to Siam to see remains of Buddha." I replied: " Your Majesty, I may go to Siam—I have been in Japan, where I have seen monuments to Buddha— but when I come to Ceylon I can study antiquity. We can show you antiquity which the other two countries do not possess." One feels we have a grand thing before us in the exploration, discovery, and piecing together, and reconstruction now being done so profitably and well by that hard-working officer of Government, Mr. Bell. I hope, as I say, that you Members of the Society will excuse any ignorance I may display of Oriental study when sitting in this Chair, but that at all events you will feel I have the interests of the Society at heart, and I will do all I can to profit by the instruction I get from the different Papers read. I thank you very much for the way in which you have responded to the vote of thanks.

This concluded the Proceedings, and those present thereafter inspected the specimens sent by Mr. Pole.

17 MAR 1908
BRITISH MUSEUM NATURAL HISTORY

PRINTED AT THE
GOVERNMENT PRINTING OFFICE,
COLOMBO, CEYLON.